

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

| | | |
|--|---|-------------------------|
| RENEE P. FAGAN, individually and as a parent, of a special needs minor child, MF; |) | CIVIL ACTION NO.: _____ |
| |) | |
| Plaintiff, |) | |
| |) | |
| v. |) | |
| |) | |
| COUNCIL ROCK SCHOOL DISTRICT |) | |
| BOARD OF EDUCATION; DR. ROBERT |) | |
| FRASER, Ed.d, in his individual capacity and |) | |
| in his official capacity as Superintendent of the |) | |
| COUNCIL ROCK SCHOOL DISTRICT and |) | |
| ANDY BLOCK, DENISE BROOKS, MARK |) | |
| BYELICH, JOSEPH L. HIDALGO, KRISTIN |) | |
| MARCELL, MARIANN MCKEE, EDWARD |) | |
| SALAMON, EDWARD F. TATE, III, DR. |) | |
| MICHAEL THORWART, all in their |) | |
| individual capacities and in their capacities as |) | |
| members of the COUNCIL ROCK, SCHOOL |) | |
| DISTRICT BOARD OF EDUCATION, |) | |
| |) | |
| Defendants. |) | |

**MEMORANDUM OF LAW IN SUPPORT OF PLAINTIFF'S MOTION FOR
TEMPORARY RESTRAINING ORDER**

COMES NOW Plaintiffs, Renee P. Fagan, individually as a sui juris *pro se* litigant and as a parent, of a special needs minor child, MF, without the assistance of an attorney, by exercising of the right to contract and refusal to CONSENT, are before this Court by Special Appearance and without waiving any rights, remedies or defenses, statutorily or procedurally, hereby, file this Complaint against, Council Rock School District Board ("Board"), Dr. Robert Fraser, Ed.d, in his individual capacity and in his official capacity as Superintendent of the Counsel Rock School District; and Andy Block, Denise Brooks, Mark Byelich, Joseph L. Hidalgo, Kristin Marcell, Mariann McKee, Edward J. Salamon Jr. , Edward F. Tate, III, and Dr. Michael Thorwart, all individually elected officials sued in their individual capacity and in their capacity

as members of the School Board (collectively, “Defendants”). In support of the claims set forth herein, Plaintiffs allege and avers as follows:

INTRODUCTION

Plaintiff, MF, is a minor child who resides in and attends Council Rock School District (“CRSD”), in Bucks County, Pennsylvania. Plaintiff, a special needs minor child is and was at all times relevant hereto a student at Council Rock Township School District, public school. Suit is brought, herein on Plaintiff, Renee P. Fagan, as a parent of minor child MF. Plaintiff, Renee P. Fagan is an adult individual who is a resident and taxpayer in the Council Rock School District, in Bucks County, Pennsylvania. Plaintiff, Renee P. Fagan is the parent and legal guardian of a special needs minor child MF.

Defendant Council Rock School District Board of Education (the “School Board” or the “Board”) is a public entity which, acting under color of law, is responsible for the formulation and implementation of all official governmental laws, policies, regulations and procedures in effect for the Council Rock School District. Defendant, Dr. Robert Fraser, was at all relevant times the Superintendent of the Council Rock School District; in that capacity, acting under color of law, responsible for the implementation of all official governmental laws, policies, regulations, and procedures governing the Council Rock School District. In addition, Defendants, Edward J. Salamon, Jr. is currently serving as the President while Kristin Marcell is currently serving as Vice-President of the School Board. The other seven Board members are Defendants, Denise Brooks, Mariann McKee, Edward F. Tate, III, Joseph Hidalgo, Andy Block, Mark Byelich, and Dr. Michael Thorwart. Plaintiff has sued all Defendants in their individual and official capacities who are operating and acting under color of state law

FACTS

A. Council Rock School District Board of Education

The Council Rock School District Board of Education is “composed of nine citizens who are representatives of the residents of Borough of Newtown, Newtown Township, Northampton Township, Upper Makefield Township, and Wrightstown Township. Each board are created statutorily, consists of nine (9) members who serve four-year terms. Elections for school board occur every two years. Five seats up for election and then two years later, four seats are up for election. Terms for all school directors are four years unless there is an unexpired term on the ballot. That seat would be for a two-year term. Board members are elected by district. Only the registered voters of a particular area may vote for a particular seat in a by-district election. The Council Rock School District school board are elected by the registered voters of a particular area and seat in a by-district election. Members appear on the primary ballot as both a Republican and/or a Democrat candidate, but may only circulate a petition on behalf of a party of which he/she is a registered member; a registered member of the other party may circulate a petition for members of that party to request your name be on the ballot

This nine-member School Board unanimously appointed Defendant Dr. Michael J. Barnes to serve as Superintendent of Schools, effective July 1, 2021. As Superintendent, Dr. Barnes is charged with the administration of the MCSD. In accordance with Section 321 of the Pennsylvania Public School Code of 1949, All North Allegheny School District Board members before being seated have executed and signed an Oath of Office swearing their support the Constitution of the United States and the Constitution of the Commonwealth of Pennsylvania, and to faithfully and impartially discharge her duties as a school director member to the best of her ability, and with the laws “now in effect and hereafter to be enacted. Upon receipt of oath they will be provided

As discussed above, the nine individuals currently serving as School Board Members are Defendants, Denise Brooks, Mariann McKee, Edward F. Tate, III, Joseph Hidalgo, Andy Block, Mark Byelich, Dr. Michael Thorwart and Edward J. Salamon, Jr. as the President while Kristin Marcell is currently serving as Vice-President of the School Board. . The nine individuals unanimously appointed Defendant, Dr. Robert Fraser, to serve as Superintendent of the Council Rock School.

This nine-member School Board unanimously appointed Defendant, Dr. Robert Fraser, Ed.d to serve as Superintendent of Schools. As Superintendent, Dr. Robert Fraser, Ed.d is charged with the administration of the CRS.D. In accordance with Section 321 of the Pennsylvania Public School Code of 1949, All Council Rock School District Board members before being seated have executed and signed an Oath of Office swearing their support the Constitution of the United States and the Constitution of the Commonwealth of Pennsylvania, and to faithfully and impartially discharge her duties as a school director member to the best of her ability, and with the laws “now in effect and hereafter to be enacted. Upon receipt of oath they will be provided.

B. Infliction of Emotional and Intentional Distress

Defendant has fostered either intentionally and/or negligently the fear mongering and intimidations tactics of district teachers in effort to enforce the overreaching policies of the school board. Plaintiff, MF, is a special need minor child with downs syndrome (DS), is non-verbal and extremely delayed in learning, and resides in and attends Council Rock School District, in Bucks County, Pennsylvania. Plaintiff, MF, is a special need minor child was at all times relevant hereto a student at Council Rock Township School District, public school. Suit is brought, herein on Plaintiff, Renee P. Fagan, as a parent of minor child MF.

Plaintiff, Renee P. Fagan is an adult individual who is a resident and taxpayer in the Council Rock School District, in Bucks County, Pennsylvania. Plaintiff, Renee P. Fagan is the parent and legal guardian of special needs child minor child MF. Defendants' actions has caused Renee P. Fagan, parent and legal guardian of special needs child minor child MF emotional stress having to endure and watch said minor special needs child MF just wanting to be like everyone else.

Plaintiff, MF, a special needs minor child currently has multiply therapies that all take place in the school settings. Plaintiff, MF, a special needs minor child relies on facial and psychical cues to understand communications and social norms. Defendants actions, optional or mandatory, has caused Plaintiff, MF, a special needs minor child further learning delays due to his current teachers and therapist(s) use of masks. Due to Defendants actions and his current teacher and /or therapist use of mask it has caused Plaintiff, MF, a special needs minor child emotional stress.

Due to Defendants actions last year, was Plaintiff, MF, a special needs minor child was forced to use online classes which consisted of approximately two calls a day for approximately 30 minutes. Plaintiff, MF, a minor child, with his special needs was unable to then as is now to learn from this method. Because of Defendants enacted mask mandates last year, Plaintiff, MF, a special needs minor child was forced to use online classes wherein he did not receive any of his needed therapies throughout the duration of the school shut down which resulted in him losing a year worth of learning which caused him to fall further behind. Any return to that kind of online format of learning is simply not an option.

Plaintiff, MF, a special needs minor child, has downs syndrome wherein he has a flat sinus cavity that is easily congested and has difficulty draining. Defendants' actions, would

cause Plaintiff, MF, a special needs minor child further mental deficiencies and loss of brain function wearing a mask. Even in play, it would cause Plaintiff, MF, a special needs minor child, to develop a sinus infection resulting in bacterial pneumonia and a hospital visit. With Defendants' mask policies, optional or mandatory in place, their actions have caused Renee P. Fagan, parent and legal guardian of her special needs minor child MF undue financial burden, emotional stress, and harm. As parent and legal guardian of Plaintiff, MF, Defendants actions with their mask policies have caused Plaintiff Renee P. Fagan, emotional stress having to endure and watch Plaintiff's minor special needs child aspiring to be like his peers.

Plaintiff, MF, is a special needs minor child with downs syndrome and can get easily confused if he attempts to wear a mask aspiring to mimic the other children and teachers. He does not understand the dangerous health hazards of wearing a mask and wants to mimic the other children and teachers in order to belong. Because of Defendants mask policies regardless of whether it is optional or mandatory, causes Plaintiff, Renee P. Fagan, parent and legal guardian of special needs child minor MF, to suffer fear and emotional stress having to endure and watch he minor special needs child MF yearning to be like others.

Defendants are acting arbitrarily, under the color of law, and lack the necessary authority with their enactment of their masks mandates, optional or otherwise, are discriminatory thereby violating Plaintiff, MF a special needs minor child, federally protected rights. 42 U.S.C. §1983, proximately causing and inhibiting his needed therapies causing and creating division between the sects of people regarding of medical condition or other factors.

C. The Masking Requirement Causes Immediate and Irreparable Harm to Students, Staff, and Community.

In his Affidavit, attached hereto as **Exhibit "A"**, Stephen E. Petty, an expert in the field of Industrial Hygiene who has testified as to the futility and danger caused by an individual

wearing a mask in order to avoid transmitting or becoming infected with Covid-19, states the following:

3. I hold relevant industry certifications including board certifications as a C.I.H. (Certified Industrial Hygienist), a C.S.P. (Certified Safety Professional), and as a P.E. (Professional Engineer) in six states (Florida, Kentucky, Ohio, Pennsylvania, Texas and West Virginia). My curriculum is attached hereto as **Exhibit i.**

4. I have served as an expert in personal protective equipment and related disciplines in approximately 400 legal cases. I have often been certified as, and provided testimony as, an expert in these areas. My list of representative cases is attached hereto as **Exhibit ii.**

5. For example, I am currently serving as an expert in the Monsanto Roundup and 3-M PFAS litigation. Recently I testified in four trials for the DuPont C-8 litigation.

6. I taught Environmental and Earth Sciences as an adjunct professor at Franklin University.

7. I hold nine U.S. patents, most related to heating, ventilation and air conditioning (HVAC) systems.

8. I am a current member in good standing of the following relevant associations: American Industrial Hygiene Association (AIHA), American Board of Industrial Hygiene (ABIH), American Conference of Governmental Ind. Hygienists (ACGIH), American Institute of Chemical Engineers (AIChE), American Society of Refrigeration, Air Conditioning and Refrigeration Engineers (ASHRAE); Member ASHRAE 40 Std. and TC 2.3, and Sigma Xi.

9. I am an expert in the field of Industrial Hygiene, which is the science and art devoted to the anticipation, recognition, evaluation, and control of those environmental factors or stressors — including viruses — arising in or from the workplace, which may cause sickness, impaired health and well-being, or significant discomfort among workers or among the citizens of the community

10. Industrial Hygiene is fundamentally concerned the proper methods of mitigating airborne/dermal hazards and

pathogens, as well as with the design and use of engineering controls, administrative controls and personal protective equipment, among other things.

11. Medical doctors, virologists, immunologists, and many public health professionals are not qualified experts in these areas by virtue of those aforementioned credentials.

12. On May 7, 2021, the Centers for Disease Control (CDC) updated its guidance, providing that the primary mechanism for transmission of Covid-19 is through airborne aerosols, and not, as previously stated, by touching contaminated surfaces or through large respiratory droplets, as also stated during previous periods of the pandemic.

13. Airborne viral aerosols can consist of a single viral particle or multiple viral particles clumped together, and usually smaller than 5 μ (microns) in size. By comparison, droplets are $>5 \mu$ to $>10 \mu$ in size.

14. A square micron is approximately 1/4000th the area of the cross-section of a human hair and 1/88th the diameter of a human hair. Covid particles are —1/10 of a micron or —1/40,000th the area of a cross section of a human hair or —1/1,000th the diameter of a human hair.

15. A recent University of Florida study capturing air samples within an enclosed automobile cabin occupied by a Covid-positive individual showed that the only culturable Covid-19 virus samples obtained were between 0.25 μ to 0.5 μ in size. Particles smaller than 5 μ are considered very small and/or very fine or aerosols.

16. Very small particles do not fall by gravity in the same rate that larger particles do and can stay suspended in still air for a long time, even days to weeks.

17. Because they stay suspended in concentration in indoor air, very small particles can potentially accumulate and become more concentrated over time indoors if the ventilation is poor.

18. Very small airborne aerosols pose a particularly great risk of exposure and infection because, since they are so small, they easily reach deep into the lung. This explains in part why Covid-19 is so easily spread, and why so little Covid-19 is required for infection.

19. Exposure to airborne aerosols is a function of two primary parameters: concentration and time. Less is better regarding both parameters.

20. For many reasons, personal protective equipment (PPE) is the least desirable way to protect people from very small airborne aerosols. Moreover, masks are not PPE since they cannot be sealed and do not meet the provisions of the Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard (RPS), namely 29 CFR 1910.134.

21. Regarding PPE, facial coverings do not effectively protect individuals from exposure to very small airborne aerosols. A device referred to as a respirator is required to provide such protection.

22. The AIHA, in their September 9, 2020 Guidance Document for COVID-19 (**Exhibit iii**) noted that the acceptable relative risk reduction methods must be >90%; mask were shown to be only 10% and 5% (see Exhibit iii - Figure 2) and far below the required 90% level.

23. Similarly, Shah, et al, 2021 (**Exhibit iv**), using ideally sealed masks and particles 1 micron in size, reported efficiencies for the more commonly used cloth masks and surgical masks of 10% and 12% respectively. No mask can be perfectly sealed, thus “real world” effectiveness would be even lower.

24. Industrial hygienists refer to a “Hierarchy of Controls” that are typically implemented to minimize exposures, including exposures to very small airborne aerosols like Covid-19.

25. Regarding practical or “engineering” controls, industrial hygienists focus on practices that dilute, destroy, or contain airborne hazards (or hazards in general).

26. PPE — especially facial coverings — do not dilute, destroy, or contain airborne hazards. Therefore, facial coverings do not appear anywhere in the Industrial Hygiene (IH) Hierarchy of Controls for very small airborne aerosols like Covid-19. Even respirators (part of the PPE Category and not masks) are in the last priority on the Hierarchy of Controls.

27. Facial coverings are not comparable to respirators. Leakage occurs around the edges of ordinary facial coverings. Thus, ordinary facial coverings do not provide a reliable level of protection against inhalation of very small airborne particles and are not considered respiratory protection.

28. For example, during the seasonal forest fires in the summer of 2020, the CDC issued public guidance warning that facial coverings provide no protection against smoke inhalation. That is because facial coverings do not provide a reliable level of protection against the small particles of ash contained in smoke. Ash particles are substantially larger than Covid-19 aerosolized particles.

29. I have reviewed the Mayfield City School District (MCSD) "Protective Facial Covering Policy During Pandemic/Endemic Events" as set forth in the Policy Manual of the MCSD Board of Education.

30. Ordinary facial coverings like the ones required by the MCSD facial covering policy do not meet any of the several key OSHA Respiratory Protection Standards for respirators.

31. Because of the gaps around the edges of facial coverings required by MCSD's policy, they do not filter out Covid-19 aerosols. The policy stating masks will be worn without gaps defies known science that masks worn today cannot be sealed and always have gaps.

32. The effectiveness of a cloth facial covering falls to zero when there is a 3% or more open area in the edges around the sides of the facial covering.

33. Most over-the-counter disposable facial coverings have edge gaps of 10% or more. When adult-sized facial coverings are used by children, edge gaps will usually greatly exceed 10%.

34. Even short breaks (e.g. to eat) expose individuals to Covid-19 aerosols in indoor spaces.

35. Ordinary cloth facial coverings like the ones required by the MCSD mask requirement do not provide any filtering benefit relative to particles smaller than 511 if not sealed.

36. Substantial mitigation of Covid-19 particles could be immediately achieved by:

- a. opening windows and using fans to draw outdoor air into indoor spaces (diluting the concentration of aerosols),
- b. setting fresh air dampers to maximum opening on HVAC systems,

- c. overriding HVAC energy controls,
- d. increasing the number of times indoor air is recycled,
- e. installing needlepoint ionization technology to HVAC intake fans, and
- f. installing inexpensive ultraviolet germicide devices into HVAC systems.

35. All of the above-referenced techniques are more effective and meet standard industrial hygiene hierarchy of controls (practices) for controlling exposures in place for nearly 100 years. The use of cloth facial coverings do not fit within these basic hierarchy of controls since masks are not PPE and cannot be sealed. There are no OSHA standards for facial coverings (masks) as respiratory protection.

36. Extended use of respiratory PPE is not indicated without medical supervision.

37. As explained in an article titled "Is a Mask That Covers the Mouth and Nose Free from Undesirable Side Effects in Everyday Use and Free of Potential Hazards?" that was published on April 20, 201, in the *International Journal of Environmental Research and Public Health* and that is attached to this Affidavit as **Exhibit iv**, the following negative effects from wearing masks was reported in the literature:

| Increased risk of adverse effects when using masks: | | | |
|---|-----------------------|-----------------------------------|---|
| Internal diseases | | Psychiatric Illness | Neurological Diseases |
| COPD | | Claustrophobia | Migraines and Headache Sufferers |
| Sleep Apnea Syndrome | Panic Disorder | Patients with intracranial Masses | |
| advanced renal Failure | Personality Disorders | Epilepsy | |
| Obesity | | Dementia | |
| Cardiopulmonary Dysfunction | | Schizophrenia | |
| Asthma | | helpless Patients | |
| fixed and sedated Patients | | | |
| Pediatric Diseases | | ENT Diseases | Occupational Health Restrictions moderate heavy physical Work |
| Asthma | | Vocal Cord Disorders | |
| Respiratory diseases | | Rhinitis and obstructive Diseases | |
| Cardiopulmonary Diseases | | | |
| Neuromuscular Diseases | | Dermatological Diseases | Gynecological restrictions |
| Epilepsy | | Acne | Pregnant Women |
| Atopic | | | |

Figure 5. Diseases/predispositions with significant risks, according to the literature found, when using masks. Indications for weighing up medical mask exemption certificates.

Example statements made in the paper include the following: "The overall possible resulting measurable drop in oxygen saturation (O₂) of the blood on the one hand and the increase in carbon dioxide (CO₂) on the other contribute to an increased noradrenergic stress response, with heart rate increase and respiratory rate increase, in some cases also to a significant

blood pressure increase.” Exhibit iv, p. 25. In fact, “Neither higher level institutions such as the WHO or the European Centre for Disease Prevention and Control (ECDC) nor national ones, such as the Centers for Disease Control and Prevention, GA, USA (CDC) or the German RKI, substantiate with sound scientific data a positive effect of masks in the public (in terms of a reduced rate of spread of COVID-19 in the population).” Exhibit iv, p. 24. For these reasons, students who are required to wear masks pursuant to a mandate suffer immediate and irreparable injury, loss, or damage.

38. In summary:

- a. PPE is the least desirable way to protect people from very small airborne aerosols.
- b. Facial coverings as required by the MCSD policy are not recognized as PPE since they cannot be sealed and are not covered by the OSHA RPS.
- c. If PPE were to be used for protection, respirators, not facial coverings as required by the MCSD policy are needed to provide any effective protection from very small airborne aerosols.
- d. Very small aerosol particles are more likely to be a greater cause of disease than respiratory droplets because they can evade PPE and reach deep into the lungs, whereas respiratory droplets have to work against gravity in order to travel up a person’s nose into the sinus.
- e. Much better alternatives to controlling exposure are available (i.e., engineering controls of dilution — ventilation with increased fresh air and destruction), and should be used to minimize exposures as opposed to masks.
- f. Individuals who are required to wear masks pursuant to a mandate suffer immediate and irreparable injury, loss, and damage due to the overall possible resulting measurable drop in oxygen saturation of the blood on one hand and the increase in carbon dioxide on the other, which contributes to an increased noradrenergic stress response, with heart rate increase and respiratory rate increase and, in some cases, a significant blood pressure increase.

Plaintiffs note that the Commonwealth of Pennsylvania was given \$7,745,724,379 pursuant to the American Rescue Plan (“ARP”) Act of 2021 by agreeing to implement the federal guidelines set forth by the CDC for COVID-19 mitigation efforts. See the attached letter from the U.S.

Secretary of Education, attached hereto as **Exhibit “B”**. See also, <https://oese.ed.gov/files/2021/08/Pennsylvania-ARP-ESSER-State-Plan-Final.pdf>. . On September 8, 2021, Noe Ortega, Ph.D., the Secretary of Education, of Commonwealth of Pennsylvania Department of Education sent a *quid pro quo* threatening letter (in reading it clearly exhibits the mantra ‘do as I say or suffer the consequences) attached hereto as **Exhibit “C”**. The letter links to the CDC guidelines available at: <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/operation-strategy.html>. The guidelines suggest that a school board would forfeit ARP allocations by making masks optional, and states that have prohibited mask mandates in schools received letter notifying them that they will not receive ARP funds. Accordingly, it seems Defendants have a financial incentive for implementing the mask mandate, despite such a requirement serves no scientific purpose, and subjects individuals who wear masks to the health risks discussed above.

Plaintiff, Renee P. Fagan is the parent and legal guardian of a special needs child minor child MF is aggrieved by the immediate and irreparable injury, loss, and damage suffered by minor special needs child because minor child is unable to wear a mask pursuant to the School Board’s mask mandate optional or otherwise, which is not only unsupported by science, but which also results in the possible resulting measurable drop in oxygen saturation of the blood on one hand and the increase in carbon dioxide on the other, which contributes to an increased noradrenergic stress response, with heart rate increase and respiratory rate increase and, in some cases, a significant blood pressure increase.

LAW AND ARGUMENT

The Federal Rules of Civil Procedure permit this Court to issue a temporary restraining order under certain conditions. Specifically, the Rules provide the following:

(b) Temporary Restraining Order.

(1) Issuing Without Notice. The court may issue a temporary restraining order without written or oral notice to the adverse party or its attorney only if: (A) specific facts in an affidavit or a verified complaint clearly show that immediate and irreparable injury, loss, or damage will result to the movant before the adverse party can be heard in opposition; and (B) the movant's attorney certifies in writing any efforts made to give notice and the reasons why it should not be required."

Fed. R. Civ. P. 65(b)(1) (emphasis added). "The decision to grant a preliminary injunction requires weighing whether the moving 'party (1) 'establish[ed] that he is likely to succeed on the merits,' (2) 'that he is likely to suffer irreparable harm in the absence of preliminary relief,' (3) 'that the balance of equities tips in his favor,' and (4) 'that an injunction is in the public interest.'" *Fowler v. Benson*, 924 F.3d 247, 256 (6th Cir. 2019) (quoting *Winter v. Nat. Res. Del. Council, Inc.*, 555 U.S. 7, 20 (2008) (emphasis added)). *Mich. Educ. Ass'n Family Retired Staff Ass'n v. Mich. Educ. Ass'n* (6th Cir. 2021).

Plaintiff, is aggrieved by the immediate and irreparable injury, loss, and damage suffered. because Plaintiff is required to wear a mask pursuant to the North Allegheny School Board's mask mandate, which is not only unsupported by science, but which also results in the possible resulting measurable drop in oxygen saturation of the blood on one hand and the increase in carbon dioxide on the other, which contributes to an increased noradrenergic stress response, with heart rate increase and respiratory rate increase and, in some cases, a significant blood pressure increase. Plaintiff is likely to succeed on the merits, will continue to suffer irreparable harm in the absence of preliminary relief, the balance of requires tip in their favor, and an injunction is in the public interest.

Violation of Procedural Due Process -
(U.S. Const. amend. V, XIV and PA Const. Art. I, § 9)

In order establish a claim under section 1983 of the Civil Rights Act, a plaintiff must prove a Defendant: (a) acted under the color of state law; (b) proximately causing; (c) the Plaintiff to be deprived of a federally protected right. 42 U.S.C. §1983. In the instant case, Defendants unquestionably acted under the color of state law. Each Individual Defendant is an elected, voting member of the Council Rock School District Board of Education with the exception of Defendant Dr. Robert Fraser, Ed.d, who is the Superintendent of the North Allegheny School District. Under the Fifth Amendment to the Constitution, no person may be deprived of life, liberty, or property without due process of law. U.S. Const. Ann., Amendment V. The Fourteenth applies the protections of the Fifth Amendment to state actors. U.S. Const. Ann., Amendment XIV. Similarly, Article 1, § 11 of the Pennsylvania Constitution provides, " All courts shall be open; and every man for an injury done him in his lands, goods, person or reputation shall have remedy by due course of law, and right and justice administered without sale, denial or delay. Suits may be brought against the Commonwealth in such manner, in such courts and in such cases as the Legislature may by law direct." Article .1, § 9 of the Pennsylvania Constitution affords the people of Pennsylvania with right to be free from violations of the procedural due process rights, and no person may be deprived of life, liberty, or property without due process of law.

Plaintiffs have constitutionally protected interests in the benefits that come from the not being subject to the Board's mask mandate, including the ability to pursue an education without being subjected to health risks that are not offset by any scientifically provable benefits. Defendants' implementation of the mask policy unlawfully deprives Plaintiffs of these and other constitutionally-protected interests without due process of law. Such deprivation occurred with no notice or meaningful opportunity to be heard as the Superintendent instated the mask mandate prior to offering an opportunity for public discussion. Such deprivation was arbitrary, capricious,

based on ignorance without inquiry into facts, and in violation of the School Board's own policies and other applicable laws. Such deprivation violates the Fifth and Fourteenth Amendments of the United States Constitution.

Violation of Procedural Due Process, Reservation of the People Powers and the Discrimination by Commonwealth and its political subdivisions. (PA Const. Art. I, § 11, 25 & 26) Against All Defendants

Under Article 1, § 11 of the Pennsylvania Constitution provides, "All courts shall be open; and every man for an injury done him in his lands, goods, person or reputation shall have remedy by due course of law, and right and justice administered without sale, denial or delay. Suits may be brought against the Commonwealth in such manner, in such courts and in such cases as the Legislature may by law direct." It also affords the people of Pennsylvania with right to be free from violations of the procedural due process rights, and no person may be deprived of life, liberty, or property without due process of law. Article 1, § 25 of the Pennsylvania Constitution affords the people of Pennsylvania with Reservation of powers in people rights to be free from violations and to guard against transgressions of the high powers which have been delegated, and declared that everything is excepted out of the general powers of government and shall forever remain inviolate. Article 1, § 26 of the Pennsylvania Constitution affords the people of Pennsylvania the rights have been infringed upon to be free from violations wherein neither the Commonwealth nor any political subdivision thereof shall deny to any person the enjoyment of any civil right, nor discriminate against any person in the exercise of any civil right.

The Council Rock School District is a quasi-governmental agency with arbitrary powers and their subordinate school is imposing and infringing upon Plaintiff constitutionally rights with their illegal and unlawful mandates of masking optional or otherwise. They are in direct violation of the oaths to do no harm, lack the necessary authority to force Plaintiffs or anyone to

comply. Plaintiff has constitutionally protected interests in the benefits that come from the not being subject to the Board's mask mandate, including the ability to pursue her employment without being-subjected to health risks that are not offset by any scientifically provable benefits. Defendants' implementation of the mask policy unlawfully deprives Plaintiff of her and others constitutionally protected interests without due process of law. Such deprivation occurred with no notice or meaningful opportunity to be heard, as the Superintendent instituted the mask mandate prior to offering an opportunity for public discussion. Such deprivation was arbitrary, capricious, based on ignorance without inquiry into facts, and in violation of the School Board's own policies and other applicable laws. Such deprivation violates Article 1, §11 of the Pennsylvania Constitution.

CONCLUSION

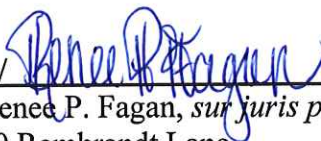
For these reasons, Plaintiffs respectfully request that the Court (i) vacate and set aside the Defendants' mask mandate as well as any other action taken by Defendants to institute the mask mandate and implement the provisions of the mask policy; (ii) declare that the Defendants' masking policy is void and without legal force or effect; (iii) declare that the institution of the mask policy and actions taken by Defendants to implement the mask policy are arbitrary, capricious, based on ignorance due to failure to inquire into facts, otherwise not in accordance with law, and without observance of required procedures; (iv) declare that the mask policy and the actions taken by Defendants to implement the mask policy are in violation of the Constitution and contrary to the laws of the United States and the Commonwealth of Pennsylvania; (5) temporarily restrain, as well as preliminarily and permanently enjoin Defendants, their agents, servants, employees, attorneys, and all persons in active concert or participation with any of them, from implementing or enforcing the mask policy and from

taking any other action to implement the masking policy that is not in compliance with applicable law; and (6) grant such other and further relief as may be just, equitable, and proper including without limitation, an award of attorneys' fees and costs to Plaintiffs.

Respectfully submitted this 22nd day of September, 2021.

Respectfully Presented,

**All Rights Reserved, Without Prejudice &
Without Recourse**

/s/ 

Renee P. Fagan, *sur juris pro se*

40 Rembrandt Lane

Holland, PA 18966

Telephone: (267)-784-9142

Renee P. Fagan, individually and as a parent,
of a special needs minor child, MF

EXHIBIT “A”

AFFIDAVIT OF STEPHEN E. PETTY, P.E., C.I.H., C.S.P.

Before me, the undersigned authority, on this day personally appeared STEPHEN E. PETTY ("Affiant") who, being by me first duly sworn, deposes and says:

1. I am an adult in sound mind and body and have personal knowledge of the fact averred herein.

2. Since April 14, 1996, I have owned and operated EES Group, Inc., a consultancy corporation specializing in health and safety and forensics.

3. I hold relevant industry certifications including board certifications as a C.I.H. (Certified Industrial Hygienist), a C.S.P. (Certified Safety Professional), and a P.E. (Professional Engineer) in six states (Florida, Kentucky, Ohio, Pennsylvania, Texas, and West Virginia). My curriculum is attached hereto as **Exhibit i**.

4. I have served as an expert in personal protective equipment and related disciplines in approximately 400 legal cases. I am certified in and have provided testimony as an expert in these areas. My list of representative cases is attached hereto as **Exhibit ii**.

5. For example, I am currently serving as an expert in the Monsanto Roundup and 3M PFAS litigation. Recently I testified in four trials for the DuPont C8 litigation.

6. I taught Environmental and Earth Sciences as an adjunct professor at Franklin University.

7. I hold nine U.S. patents relating to heating, ventilation and air conditioning (HVAC) systems.

8. I am a current member in good standing of the following relevant associations: American Industrial Hygiene Association (AIHA), American Board of Industrial Hygiene (ABIH), American Conference of Governmental Industrial Hygienists (ACGIH), American Institute of Chemical Engineers (AIChE), American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE); Member ASHRAE 40 Std. and TC 2.3, and Sigma Xi.

9. I am an expert in the field of Industrial Hygiene, which is the science and art devoted to the anticipation, recognition, evaluation, and control of those environmental factors or stressors — including viruses — arising in or from the workplace, which may cause sickness, impaired health and well-being, or significant discomfort among workers or among the citizens of the community.

10. Industrial Hygiene is fundamentally concerned with the proper methods of mitigating airborne/dermal hazards and pathogens, as well as with the design and use of engineering controls, administrative controls, and personal protective equipment, among other things.

Affidavit of Stephen E. Petty, P.E., C.I.H., C.S.P.

11. Medical doctors, virologists, immunologists, and many public health professionals are not qualified experts in these areas by virtue of those aforementioned credentials.

12. On May 7, 2021, the Centers for Disease Control (CDC) updated its guidance, providing that the primary mechanism for transmission of Covid-19 is through airborne aerosols, and not, as previously stated, by touching contaminated surfaces or through large respiratory droplets, as also stated during previous periods of the pandemic.

13. Airborne viral aerosols can consist of a single viral particle or multiple viral particles clumped together, and usually smaller than $5\ \mu$ (microns) in size. By comparison, droplets are $>5\ \mu$ to $>10\ \mu$ in size.

14. The area of a micron by a micron is approximately 1/4,000th of the area of the cross-section of a human hair and 1/88th the diameter of a human hair. Covid particles are 1/10 of a micron or $\sim 1/40,000$ th of the area of a cross section of a human hair and $\sim 1/880$ th the diameter of a human hair.

15. A recent University of Florida study capturing air samples within an enclosed automobile cabin occupied by a Covid-positive individual showed that the only culturable Covid-19 virus samples obtained were between $0.25\ \mu$ to $0.5\ \mu$ in size. Particles smaller than $5\ \mu$ are considered very small and/or very fine or aerosols.

16. Very small particles do not fall by gravity in the same rate that larger particles do and can stay suspended in still air for a long time, even days to weeks.

17. Because they stay suspended in concentration in indoor air, very small particles can potentially accumulate and become more concentrated over time indoors if the ventilation is poor.

18. Very small airborne aerosols pose a particularly great risk of exposure and infection because, since they are so small, they easily reach deep into the lung. This explains in part why Covid-19 is so easily spread, and why so little Covid-19 is required for infection.

19. Exposure to airborne aerosols is a function of two primary parameters: concentration and time. Less is better regarding both parameters.

20. For many reasons, personal protective equipment (PPE) is the least desirable way to protect people from very small airborne aerosols. Moreover, masks are not PPE since they cannot be sealed and do not meet the provisions of the Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard (RPS), namely 29 CFR 1910.134.

21. Regarding PPE, facial coverings do not effectively protect individuals from exposure to very small airborne aerosols. A device referred to as a respirator is required to provide such protection.

Affidavit of Stephen E. Petty, P.E., C.I.H., C.S.P.

22. The AIHA, in their September 9, 2020 Guidance Document for COVID-19 (**Exhibit iii**) noted that the acceptable relative risk reduction methods must be $\geq 90\%$; masks were shown to be only 10% and 5% (see Exhibit iii - Figure 2) and far below the required 90% level.

23. Similarly, Shah et al, 2021 (**Exhibit iv**), using ideally sealed masks and particles 1 micron in size, reported efficiencies for the more commonly used cloth masks and surgical masks of 10% and 12% respectively. No mask can be perfectly sealed, thus “real world” effectiveness would be even lower.

24. Industrial hygienists refer to a “Hierarchy of Controls” that are typically implemented to minimize exposures, including exposures to very small airborne aerosols like Covid-19.

25. Regarding practical or “engineering” controls, industrial hygienists focus on practices that dilute, destroy, or contain airborne hazards (or hazards in general).

26. PPE — especially facial coverings — do not dilute, destroy, or contain airborne hazards. Therefore, facial coverings are not contained in the Industrial Hygiene (IH) Hierarchy of Controls. Even respirators (part of the PPE Category and not masks) are in the last priority on the Hierarchy of Controls.

27. Facial coverings are not comparable to respirators. Leakage occurs around the edges of ordinary facial coverings. Thus, ordinary facial coverings do not provide a reliable level of protection against inhalation of very small airborne particles and are not considered respiratory protection.

28. For example, during the seasonal forest fires in the summer of 2020, the CDC issued public guidance warning that facial coverings provide no protection against smoke inhalation. That is because facial coverings do not provide a reliable level of protection against the small particles of ash contained in smoke. Ash particles are substantially larger than Covid-19 aerosolized particles.

29. I have reviewed the Mayfield City School District (MCSD) “Protective Facial Covering Policy During Pandemic/Endemic Events” as set forth in the Policy Manual of the MCSD Board of Education.

30. Ordinary facial coverings like the ones required by the MCSD facial covering policy do not meet any of the several key OSHA Respiratory Protection Standards for respirators.

31. Because of the gaps around the edges of facial coverings required by MCSD’s policy, they do not filter out Covid-19 aerosols. The policy stating masks will be worn without gaps defies known science that masks worn today cannot be sealed and always have gaps.

32. The effectiveness of a cloth facial covering falls to zero when there is a 3% or more open area in the edges around the sides of the facial covering.

33. Most over-the-counter disposable facial coverings have edge gaps of 10% or more. When adult-sized facial coverings are used by children, edge gaps will usually greatly exceed 10%.

Affidavit of Stephen E. Petty, P.E., C.I.H., C.S.P.

32. Even short breaks (e.g. to eat) expose individuals to Covid-19 aerosols in indoor spaces.

33. Ordinary cloth facial coverings like the ones required by the MCSD mask requirement do not provide any filtering benefit relative to particles smaller than 5μ if not sealed.

34. Substantial mitigation of Covid-19 particles could be immediately achieved by:

- a. opening windows and using fans to draw outdoor air into indoor spaces (diluting the concentration of aerosols),
- b. setting fresh air dampers to maximum opening on HVAC systems,
- c. overriding HVAC energy controls,
- d. increasing the number of times indoor air is recycled,
- e. installing needlepoint ionization technology to HVAC intake fans, and
- f. installing inexpensive ultraviolet germicide devices into HVAC systems.

35. All of the above-referenced techniques are more effective and meet standard industrial hygiene hierarchy of controls (practices) for controlling exposures in place for nearly 100 years. The use of cloth facial coverings do not fit within these basic hierarchy of controls since masks are not PPE and cannot be sealed. There are no OSHA standards for facial coverings (masks) as respiratory protection.

36. Extended use of respiratory PPE is not indicated without medical supervision.

37. As explained in an article titled "Is a Mask That Covers the Mouth and Nose Free from Undesirable Side Effects in Everyday Use and Free of Potential Hazards?" that was published on April 20, 2021, in the *International Journal of Environmental Research and Public Health* and that is attached to this Affidavit as **Exhibit v**, the following negative effects from wearing masks was reported in the literature:

Affidavit of Stephen E. Petty, P.E., C.I.H., C.S.P.

| <u>Increased risk of adverse effects when using masks:</u> | | |
|--|-----------------------------------|---|
| <u>Internal diseases</u> | <u>Psychiatric Illness</u> | <u>Neurological Diseases</u> |
| COPD | Claustrophobia | Migraines and Headache Sufferers |
| Sleep Apnea Syndrome | Panic Disorder | Patients with Intracranial Masses |
| advanced renal Failure | Personality Disorders | Epilepsy |
| Obesity | Dementia | |
| Cardiopulmonary Dysfunction | Schizophrenia | |
| Asthma | helpless Patients | |
| | fixed and sedated Patients | |
| <u>Pediatric Diseases</u> | <u>ENT Diseases</u> | <u>Occupational Health Restrictions</u> |
| Asthma | Vocal Cord Disorders | moderate / heavy physical Work |
| Respiratory diseases | Rhinitis and obstructive Diseases | |
| Cardiopulmonary Diseases | | <u>Gynecological restrictions</u> |
| Neuromuscular Diseases | <u>Dermatological Diseases</u> | Pregnant Women |
| Epilepsy | Acne | |
| | Atopic | |

Figure 5. Diseases/predispositions with significant risks, according to the literature found, when using masks. Indications for weighing up medical mask exemption certificates.

Example statements made in the paper include the following: “The overall possible resulting measurable drop in oxygen saturation (O₂) of the blood on the one hand and the increase in carbon dioxide (CO₂) on the other contribute to an increased noradrenergic stress response, with heart rate increase and respiratory rate increase, in some cases also to a significant blood pressure increase.” Exhibit v, p. 25. In fact, “Neither higher level institutions such as the WHO or the European Centre for Disease Prevention and Control (ECDC) nor national ones, such as the Centers for Disease Control and Prevention, GA, USA (CDC) or the German RKI, substantiate with sound scientific data a positive effect of masks in the public (in terms of a reduced rate of spread of COVID-19 in the population).” Exhibit v, p. 24, for these reasons, students who are required to wear masks pursuant to a mandate suffer immediate and irreparable injury, loss, or damage.

38. In summary:

- a. PPE is the least desirable way to protect people from very small airborne aerosols.
- b. Facial coverings as required by the MCS D policy are not recognized as PPE since they cannot be sealed and are not covered by the OSHA RPS.
- c. If PPE were to be used for protection, respirators, not facial coverings as required by the MCS D policy are needed to provide any effective protection from very small airborne aerosols.
- d. Very small aerosol particles are more likely to be a greater cause of disease than respiratory droplets because they can evade PPE and reach deep into the lungs, whereas respiratory droplets have to work against gravity in order to travel up a person's nose into the sinus.

Affidavit of Stephen E. Petty, P.E., C.I.H., C.S.P.

- e. Much better alternatives to controlling exposure are available (i.e., engineering controls of dilution – ventilation with increased fresh air and destruction), and should be used to minimize exposures as opposed to masks.
- f. Individuals who are required to wear masks pursuant to a mandate suffer immediate and irreparable injury, loss, and damage due to the overall possible resulting measurable drop in oxygen saturation of the blood on one hand and the increase in carbon dioxide on the other, which contributes to an increased noradrenergic stress response, with heart rate increase and respiratory rate increase and, in some cases, a significant blood pressure increase.

Stephen Petty
Stephen Petty, P.E., C.I.H., C.S.P.

STATE OF OHIO

COUNTY OF FRANKLIN

Sworn to and subscribed before me this 1st day of September, 2021, by Stephen Petty, () who is personally known to me or () who produced FL. drivers license as identification.

Lori A. Jones
NOTARY PUBLIC, State of Ohio

Commission No. _____

My commission expires: 2-3-2026



LORI A JONES
Notary Public
State of Ohio
My Comm. Expires
February 3, 2026

**Mr. Stephen E. Petty, P.E., C.I.H., C.S.P.
President**

Company

EES Group, Inc.
(d/b/a - Engineering & Expert Services, Inc.)
1701 E. Atlantic Blvd., Suite 5
Pompano Beach, FL 33060

Education

B.S., Chemical Engineering, University of Washington
M.S., Chemical Engineering, University of Washington
M.B.A., University of Dayton

Experience

General

Mr. Petty is President of EES Group, Inc. (Engineering & Expert Services, Inc.). He started EES Group, Inc. in 1996, ultimately having offices in Ohio (Columbus and Cleveland) and in Florida (Pompano Beach). In 2015, he sold the Ohio portion of EES Group, Inc. while retaining Florida operations. Prior to starting EES Group, Inc. in 1996, Mr. Petty was the Manager of Residential and Commercial Technology at Columbia Energy and a Senior Research Engineer at Battelle. He has 37 years of forensic engineering, environmental health and safety, and energy experience. Since 2002, he has completed or supervised over 7,000 engineering forensic and health and safety projects for nearly 100 clients. This culminated in the writing of a Forensic Engineering textbook targeted at assessing claims for the insurance industry (*Forensic Engineering: Damage Assessments for Residential and Commercial Structures*, January 3, 2013, CRC Press publication; 2nd Edition to issue in 2022).

Mr. Petty's health and safety experience has focused on projects for the legal community (expert witness), the insurance industry, institutions, and the private sector. His expertise covers the area of Professional Engineering (PE's in six states), Industrial Hygiene (registered Certified Industrial Hygienist - CIH) and safety (registered Certified Safety Professional - CSP). As a CIH, he investigates the causes/solutions of an individual's sickness, impaired health, and discomfort at work and in the home. As a CSP, he investigates situations primarily arising out of possible Occupational Safety and Health Administration (OSHA) violations associated with workplace injuries. In other cases, this extends to customers injured at facilities where they are working or shopping. Finally, he is a certified Asbestos Evaluation Specialist in Ohio.

Mr. Petty has been involved in ~400 expert witness cases to date, with a primary focus on exposure to organic chemicals, inorganic chemicals, pesticides, PFOA, PFAS, mold, bacteria (*Legionella*), heat and bio-toxins; OSHA workplace compliance (chemical exposures, amputations, and slips, trips and falls, and building envelope systems). He has also supported/testified on building envelope, water cause and origin, structural, and roof damage claims. His company assembled a nine-member team of experts that

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

won the expert witness contract for the Ohio School Facilities Commission (OSFC) from 2004-2008.

Mr. Petty has extensive expertise on heating, ventilation and air conditioning (HVAC) systems and holds nine (9) U.S. patents primarily related to HVAC systems.

His safety and environmental experience also includes completion of many complex projects in Risk Assessment (BUSTR, EPA and VAP), Industrial Hygiene, Process Safety Management (PSM), Risk Management Plans (Health and Safety Audits), Environmental Assessments (EA) and Environmental Impact Statements (EIS), and air and water permits (PTI, PTO, NPDES, etc.) for numerous clients across the United States.

Finally, he has served in a leadership role in technology evaluations, business plans, and product development activities for dozens of products and ventures. He has been the invited dinner/lunch speaker to ASHRAE/AIHA and legal association functions.

Health and Safety Experience

- Mr. Petty has been utilized as an expert witness in ~400 cases primarily related to human exposure(s) and safety (OSHA). In the exposure area, he has worked/testified on cases of exposure to acid gases, benzene, isocyanates, formaldehyde, gasoline, paint products, other organic chemicals, PFOA/PFAS silica, pesticides, Legionella and other bacteria and molds. In the safety area, he has worked/testified in worker exposure to chemicals, falls, and amputation cases and the standard of care required to protect workers and customers. He is recognized for his ability to reduce complex sets of information regarding exposure and compliance with regulatory standards into simple but accurate reports and presentations. Areas of practice include:
 - Occupational Safety and Health Administration Regulations:
 - OSHA Health and Safety Regulations for Workers 29 CFR 1910 General Industry and 29 CFR 1926 Construction Industry
 - OSHA Process Safety Management of Highly Hazardous Chemicals - 29 CFR 1910.119
 - Personal Protective Equipment - PPE - 29 CFR 1910.132
 - Respiratory Protection Standard - 29 CFR 1910.134 and preceding/current ANSI Z88 Standards.
 - 29 CFR 1910.1000 - OSHA PEL and Controls Standard
 - 29 CFR 1910.1028 - Benzene Standard
 - Hazard Communication Standard - HAZCOM - 29 CFR 1910.1200 and preceding/current ANSI Z129.1 (Precautionary Labeling), ANSI Z400.1 (MSDS Preparation) and LAPI Industry Standards (7 Editions from 1945 forward).
 - Mine Safety Health Administration (MSHA) EH&S Regulations - 30 CFR Parts 1 to 199

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

- United State Environmental Protection Agency - USEPA - 40 CFR (Including pesticides, hazardous wastes, permitting, remediation, and Process Safety Management).
- DOT Transportation Regulations and Spill Response - Hazardous Waste Operations and Emergency Response (HAZWOPER) - 46 CFR.

Mr. Petty is also trained in Hazardous Waste Operations and Emergency Response (HAZWOPER) (40-hr.) and has served as a trainer for the 40-hr. course.

- Mr. Petty is a recognized expert in Risk Assessment (RA) having been one of 14 to take the first Risk Assessment courses offered by the Ohio State University & University of Cincinnati Schools of Public Health in 1997. In addition to having completed a dozen risk assessments, he was selected by the State of Ohio Bureau of Storage Tank Regulators (BUSTR) to help write their 1999 UST RA regulations. He was selected to train BUSTR staff RA (5-week course) and to help write the on-line RA webpage, proof the equations, and to help with the on-line help handbook.
- He has completed dozens of indoor air sampling projects for residential, commercial, and industrial clients. Clients include Grange Insurance Company, Northwest Local School District, Children's Hospital, Berger Hospital, Citgo, Salem University, and Nestle.
- He has completed dozens of mold field evaluation projects. In this area, he attended a one-week ACGIH mold course in late 2002. He also received his residential mold inspector credentials from the IESO in 2003.
- Examples of specific projects completed are:
 - Conducted worker illness IAQ program where Iraqi documents were being scanned. Sampled for anthrax, bio-toxins, mold, bacteria, VOCs, CO and CO₂, temperature and humidity to help determine cause of worker complaints.
 - Sampled surface and materials for anthrax and bio-toxins at two commercial facilities.
 - Selected and completed analysis to determine cause of illness to players in their locker room at Nationwide Arena for the Columbus Blue Jackets professional hockey team.
 - Served as an expert to the OSFC on building HVAC and human comfort issues in school buildings.
 - Developed implementation templates for several Process Safety Management (PSM) and Risk Management Program (RMP) clients (e.g. Nestle facilities).
 - Prepared public meeting presentation materials for AEP RMPs at their Conesville and Tanners Creek power plants. Focus was to match public legal requirements with needs of the client, and development and presentation of worst case and alternative case release scenarios under Part 68 of 40 CFR.

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

- Completed PSM programs for two Southwest Research Institute (SwRI) facilities and two Nestle facilities. Focus was on completing process hazards analyses (PrHAs) and on setting up ongoing PSM programs. For Nestle, set up file-based system, wrote plans for all 14 major elements, and provided detailed checklists and guidance on sections such as training, mechanical integrity, etc.
 - Completed multiple ventilation projects for American Electric Power Plant facilities to determine best locations (performance vs. cost) for hazardous gas monitors in power plants and whether or not ductwork was contaminated with mold.
 - Completed series of EH&S projects for Dublin schools (e.g. air quality audits and noise analyses). Completed air clearance testing and reporting and held public meetings for the vandalism clean-up efforts of Grizzell Middle School.
 - Conducted industrial hygiene audits and testing for numerous public and private clients. Focused on HVAC systems, sampling (CO, CO₂, relative humidity, molds, dust, bacteria, formaldehyde, VOCs, and isocyanates) and remediation/abatement.
 - Completed Failure Modes & Effects Analyses (FMEA) for DOD BZ Nerve Agent Plant design. Plant was later built, operated, and decommissioned in Pine Bluff, AR without incident.
- Developed IAQ solutions based on ASHRAE Standards and new technologies (e.g. desiccants).
 - Developed and taught OSHA HAZWOPPER courses (40-hr, 24-hr and 8-hr).
 - Voting member ASHRAE TC 8.3; corresponding member ASHRAE TC 3.5 (Desiccants).
 - Adjunct Professor at Franklin University. Instructor of Environmental and Earth Sciences courses.

Engineering Experience

- President and Owner of EES Group, Inc. (EES) since 1996. Developed EES into one of the leading forensic companies in the state of Florida and Ohio.
- Author of *Forensic Engineering: Damage Assessments for Residential and Commercial Structures*, January 3, 2013, a CRC Press publication (2nd Edition to issue in early 2022). The book provides guidance on engineering claims assessments for the insurance industry.
- Developed forensics libraries and technical bulletins on how to assess insurance claims and fraud associated with claims. Lead author of refereed journal article reviewing hail damage from ~750 individual assessments.
- Completed or supervised over 7,000 forensics inspection projects for ~100 insurance companies and other private sector clients since 2002. Projects were associated with structural failures in residential and commercial buildings,

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

structural damage and failures caused by vehicles striking buildings, water causation and origin analysis, causes of plumbing failures, HVAC failures and damage, roof system failures and structural damage, mold cause, origin and removal, lead cause and removal, hail damage, and lightning claims. Also completed or supervised over 200 insurance appraisals (negotiated settlements) for the industry. Was selected and completed role as an umpire for a 36-building one million dollar hail claim dispute. Testified in trial on roofing claim disputes. Specifically requested for difficult projects and for projects in the state of Texas.

- Led company in efforts to bid and win roofing and environmental contracts with the Ohio School Facilities Commission (OSFC).
- Managed the turnkey design, permitting, and building of a fuel farm facility (\$750K) for The Ohio State University (OSU) Airport (2000). Project entailed the layout, design, and installation of six aboveground storage tanks (ASTs), 12,000 gallons each, and the removal and closure of four existing USTs. Fuels included Jet-A and Av-Gas. Project roles included site plans/layouts, preparation of subcontractor specifications, construction oversight, concrete foundation and subsurface design, permitting (PTI and PTO), start-up troubleshooting, and commissioning activities.
- Was lead researcher on two teams of nationally recognized residential and commercial heat pump development programs: i) Battelle (Double-Effect Absorption Heat Pump) and ii) Columbia Gas System (Dual Cycle Heat Pump). Both projects met goals for performance (efficiency and capacity). Research resulted in receipt of six U.S. Patents.
- Co-designed parking lot and storm-water collection system for major trucking firm on 40-acre site in Cleveland. Project began as a site assessment and concluded with facility design.
- Process engineer for 200 million gallons-per-day wastewater treatment plant for a Weyerhaeuser paper mill.
- Evaluated incineration technology and cost/benefit for an incinerator that burned organophosphate and chlorinated thio-ether wastes. Developed source term for present and future emissions under varying load rates.
- Prepared a carbon treatment designs for removing organophosphates and chlorinated thio-ether, and nerve agents from wastewater.
- Designed/permitted first of three mobile wastewater treatment facilities in the State of Ohio.
- Developed a process to eliminate HF/tar hazardous waste generation from an electronics manufacturing process.
- Developed processes to reduce contamination of water from oil spills, including biodegradation and controlled combustion.
- Conducted bench-scale analysis of reverse osmosis, ultrafiltration, wet air oxidation, and solvent extraction treatment processes.

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

Environmental Experience

- Provided 8-hr. Tier 1 & Tier 2 training to State of Ohio BUSTR site coordinators (May 23, 2000).
- Provided approximately 40 hours of Risk Assessment Training (five 8-hr. training sessions) to BUSTR coordinators (May 1999).
- Member of BUSTR's new rules advisory committee (1999).
- Completed over a dozen BUSTR Tier 2 and Tier 3 Risk Assessments (RA) for clients such as CITGO, AEP, Anderson Concrete, and the Port Columbus Airport Authority. Creative solutions saved years of remediation and millions of dollars.
- Completed BUSTR Tier 4 RA for American Electric Power.
- Completed Environmental Assessment for NASA - Lewis Rocket Engine Test Facility.
- Completed dozens of Federal/State air, water, and hazardous waste permits (e.g., PTI, PTO, FESOP and NPDES) for dozens of industrial clients.
- Developed Spill Prevention, Controls and Countermeasures (SPCC) Plan template according to 40 CFR 112. Developed SPCC template, which has been audited and accepted by Ohio EPA. Prepared site-specific SPCC's for clients such as L.J. Minor (Cleveland), Mickley Oil Company, Doersam LLC, Federal Express Corporation (Blue Ash), and Central Ohio Asphalt.
- Prepared hazardous waste evaluation for the NASA-Merritt Island Environmental Impact Assessment of Space Shuttle SRB refurbishing facility in a wildlife area.
- Developed a portion of the database used in preparing the original Resource Conservation and Recovery Act (RCRA).
- Developed BUSTR Residential and Commercial Risk Assessment (RA) Models.

Other Experience

- Responsible for all intellectual property (e.g., patents) and commercialization of residential, commercial, vehicle, and fuel cell technology for Columbia Gas System and their development partners.
- Served on 11 Industry Advisory Bodies [Gas Research Institute (GRI), American Gas Association (AGA), U.S. Department of Energy Funding Initiative - \$2 billion (USDOE-FI), and Gas Utilization Research Forum (GURF)].
- Served as U.S. DOE expert reviewer on cooling, heat pump, desiccant, and power generation proposals.
- Served on U.S. DOE expert review panel for desiccant program area.
- Prepared business acquisition due diligence for Columbia Gas System corporate staff (e.g. micro-turbines).
- Provided technical and business due diligence for three venture capital firms on a dozen emerging markets.

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

- Authored budget recommendations for DOE Funding Initiative in Power Generation, Cooling, and NGV areas based on industry consensus meetings.
- Served/Serving on ANSI and ASHRAE Standards Working Groups (Z21.40 and SPC 40).
- Provided keynote presentations on Energy Deregulation for four major utilities and several industry groups.
- Completed nationally recognized market research on U.S. cooling, refrigeration, and controls markets.

Certifications, Registrations, and Honors

Registered Professional Engineer, State of Florida #76583, State of Kentucky #24116, State of Ohio #49063, State of Pennsylvania #PE-053899-E, State of Texas #101855 (also listed windstorm inspector), and State of West Virginia #16311

Certified Industrial Hygienist, 8067 CP, November 2000.

Certified Safety Professional, 23563, November 2012

Asbestos Hazard Evaluation Specialist – State of Ohio #ES34643

Certified Residential Mold Inspector – (IESO) - 2004

ASHRAE Certificate of Appreciation, May 2002, ASHRAE Standard 40.

ASHRAE Fundamentals of HVAC Systems – 35 CEUs (Feb. to April 2008).

AIHA CIH Refresher (Univ. of Michigan) – 40-hr. class - 1998

Certificate of Accomplishment in Risk Assessment from The Ohio State University School of Public Health – 120-hr. class – 1997

Certificate of Achievement – Ohio Department of Transportation 80-hr. class – Managing in the Environmental Process – 1997

Roof Consulting Institute (RCI) Courses:

- Advanced Thermal & Moisture Control (5/14/2008)
- Professional Roof Consulting (5/15-16/2008)
- Roof Technology & Science I (9/15-16/2009)
- Roof Technology & Science II (9/17-18/2009)

Undergraduate Scholarships from the Pulp and Paper Foundation Scholarship Fund for Freshman, Sophomore, and Junior Years.

Certificate of High Scholarship – Department of Chemical Engineering – University of Washington – Jr. Year - 1978.

Undergraduate Scholarship from Department of Chemical Engineering, Senior Year.

Undergraduate B.S. Ch.E. – Cum Laude.

Graduate School - M. S. Ch. E. – 2nd in Class

Raymond Roesch Award, University of Dayton, (awarded annually to top MBA graduate); graduated first in MBA class with 4.0 GPA – 1988.

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

Memberships

Member, American Industrial Hygiene Association (AIHA)
Member, American Conference of Governmental Industrial Hygienists (ACGIH)
Member, American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE). Voting Member TC 8.3.
Member, American Institute of Chemical Engineers (AIChE)
Member, Indoor Environmental Standards Organization (IESO)
Member, Roof Consulting Institute (RCI)
Member, Society of Automotive Engineers (SAE)
Member, Sigma Xi

U.S. Patents

U.S. 6,649,062. November 18, 2003. Fluid-Membrane Separation. Petty.
U.S. 6,109,339. August 29, 2000. Heating System. Talbert, Ball, Yates, Petty, and Grimes.
U.S. 5,769,033. June 23, 1998. Hot Water Storage. Petty and Jones.
U.S. 5,636,527. June 10, 1997. Enhanced Fluid-Liquid Contact. Christensen and Petty.
U.S. 5,546,760. August 20, 1996. Generator Package for Absorption Heat Pumps. Cook, Petty, Meacham, Christensen, and McGahey.
U.S. 5,533,362. July 9, 1996. Heat Transfer Apparatus for Heat Pumps. Cook, Petty, Meacham, Christensen, and McGahey.
U.S. 5,339,654. August 23, 1994. Heat Transfer Apparatus for Heat Pumps. Cook, Petty, Meacham, Christensen, and McGahey.
U.S. 5,067,330. November 26, 1991. Heat Transfer Apparatus for Heat Pumps. Cook, Petty, Meacham, Christensen, and McGahey.
U.S. 4,972,679. November 27, 1990. Absorption Refrigeration and Heat Pump System with Defrost. Petty and Cook.

Books

Forensic Engineering: Damage Assessments for Residential and Commercial Structures, January 4, 2013, CRC Press, 804 pp.

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

Publications

Stephen E. Petty, 2020, *Visible dust and asbestos: what does it suggest regarding asbestos exposures?* Journal of Scientific Practice and Integrity. 2(1). DOI: 10.35122/001c.14496, August.

Stephen E. Petty, Mark Nicas, Anthony A. Boiarski, 2011. *A quantitative Method for Estimating Dermal Benzene Absorption from Benzene-containing Hydrocarbon Liquids*, Int. J Occup Environ Health, Vol. 17/No. 4, Oct./Dec. 2011, pgs. 287-300.

Stephen E. Petty, PE, CIH, Mark Petty, Tim Kasberg, 2009. *Evaluation of Hail-Strike Damage to Asphalt Shingles Based on Hailstone Size, Roof Pitch, Direction of Incoming Storm, and Facing Roof Elevation*, Interface, The Journal of RCI; May/June, Vol. XXVII, No. 5, pgs. 4-10.

Peter F. Infante, MPH, DRPH, Stephen E. Petty, PE, CIH, D. H. Groth, G. Markowitz, D. Rosner, 2009. *Vinyl Chloride Propellant in Hair Spray and Angiosarcoma of the Liver among Hairdressers and Barbers: Case Reports*, Int. J Occup Environ Health; 15:36-42.

Petty, S.E., Ball, D., Nation, J. and S. Talbert, 1997. *A New, Integrated Compact Combo System for Multi-Family Residences*, Proceedings of the 48th Conference Papers Available from the 48th International Appliance Technical Conference (IATC), May 12 - 14, 1997, Ohio State University – Fawcett Center, Columbus, OH.

Petty, S.E., 1997. *Mack's LNG Truck Ready to Move into Refuse Collection Market*, NGV Tech Update, Gas Research Institute, Spring Edition, pgs. 1 and 3.

Petty, S., 1983. *Combustion of Crude Oil on Water*, Fire Safety Journal, Vol. 5, pgs. 123-134.

Petty, S., B.A. Garrett-Price and G.L. McKown, 1983. *Preliminary Assessment of the Use of Heat Transfer Fluids for Solar Thermal Energy Systems*, EPA-600/S7-83-021, U.S. Environmental Protection Agency, April.

English, C.J., S.E. Petty and D.S. Sclarew, 1983. *Treatment of Biomass Gasification Wastewaters Using a Combined Wet Air Oxidation/Activated Sludge Process*, PNL-4593, Contract DE-AC06-76RLO-1830, U.S. Department of Energy, February.

Petty, S.E., W. Wakamiya, C.J. English, J.A. Strand and D.D. Mahlum, 1982. *Assessment of Synfuel Spill Cleanup Options*, PNL-4244, UC-11,90i,91, Contract DE-AC06-76RLO 1830, U.S. Department of Energy, April.

Wakamiya, W., Petty, S.E., Boiarski, A., Putnam, A., 1982. *Combustion of Oil on Water: An Experimental Program*, U. S. Department of Energy, DOE/NBM/1002, Contract # AC06-76RLO 1830, February.

Petty, S., B.A. Garrett-Price and G.L. McKown, 1982. *Preliminary Assessment of the Use of Heat Transfer Fluids for Solar Thermal Energy Systems*, PNL-4182, IAG No. AD-89-F-1-623-0, U.S. Environmental Protection Agency, January.

Petty, S.E., N.E. Bell and C.J. English, Jr., 1981. *Treatment of Biomass Gasification Wastewaters Using Wet Air Oxidation, Solvent Extraction and Reverse Osmosis*, PNL

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

SA-10093, Proceedings of the 13th Biomass Thermochemical Conversion Contractor's Meeting, Arlington, VA, October 27-29, pgs. 718-747.

Petty, S.E., N.E. Bell and C.J. English, Jr., 1981. *Treatment of Biomass Gasification Wastewaters Using Wet Air Oxidation, Solvent Extraction and Reverse Osmosis*, Contract DE-AC06-76RLO-1830, U.S. Department of Energy, October.

Petty, S.E., S.D. Eliason and M.M. Laegreid, 1981. *Treatment of Biomass Gasification Wastewaters Using Reverse Osmosis*, PNL-4018, Contract DE-AC06-76RLO-1830, U.S. Department of Energy, September.

Mercer, B.W., W. Wakamiya, S.E. Petty, J.A. Strand and D.D. Mahlum, 1981. *Assessment of Synfuel Spill Cleanup Options*, PNL-SA-9806 – Proceedings of DOE Workshop on Processing, Needs, and Methodology for Wastewater from the Conversion of Coal, Oil Shale and Biomass to Synfuels, Richland, WA.

Eakin, D.E., J.M. Donovan, G.R. Cysewski, S.E. Petty and J.V. Maxham, 1981. *Preliminary Evaluation of Alternative Ethanol/Water Separation Processes*, PNL-3823, UC-98d, Contract DE-AC06-76RLO-1830, U.S. Department of Energy, May.

Zima, G.E., G.H. Lyon, P.G. Doctor, G.R. Hoenes, S.E. Petty and S.A. Weakley, 1981. *Some Aspects of Cost/Benefit Analysis for In-Service Inspection of PWR Steam Generators*, NUREG/CR-1490, PNL-3388, U.S. Nuclear Regulatory Commission, May.

Petty, S.E., 1981. *Potential Synthetic Fuel Spill Sources and Volumes to the Year 2000*, Contract DE-AC06-76RLO 1830, U.S. Department of Energy, March.

Petty, S.E. and W. Wakamiya, 1981. *Projections on Synfuels Production to the Year 2000*, Contract DE-AC06-76RLO 1830, U.S. Department of Energy, January

Petty, S.E., and J.V. Maxham, 1981. *Ethanol-Water Separation Using a Corn as a Dehydration Agent*, Contract DE-AC06-76RLO 1830, U.S. Department of Energy, January.

J.V. Maxham and S.E. Petty, 1980. *Dehydration of Alcohol/Water Solutions with Solid Dehydration Agents to Produce Alcohol for Gasohol*, Contract DE-AC06-76RLO 1830, U.S. Department of Energy, September.

Petty, S.E., and J.V. Maxham, 1980. *Ethanol-Water Separation Using a Reverse Osmosis Process*, PNL-3579, Contract DE-AC06-76RLO 1830, U.S. Department of Energy, September.

English, C.J., S. E. Petty and G.W. Dawson. 1980. *Identification of Hazardous Waste Disposal Sites and Management Practices in Region 10*. Contract WA-79-A375, U.S. Environmental Protection Agency, February.

Dawson, G.W., C.J. English and S.E. Petty, 1980. *Physical Chemical Properties of Hazardous Waste Constituents*, U. S. Environmental Protection Agency, Southeast Environmental Research Laboratory, Athens, Ga. March 5.

Wakamiya, W., J.V. Maxham and S.E. Petty, 1979. *Biomass Gasification Wastewater Treatment – Interim Report*, PNL-SA-8165, Contract EY-76-C-06-1830, U.S. Department of Energy, September.

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

SUMMARY OF PRESENTATIONS

By
Stephen Petty

| DATE | LOCATION | AUDIENCE | TOPIC | DURATION (Hrs) |
|------------------|---|---|--|----------------|
| April 1, 1999 | Bureau of Underground Storage Tank Regulators (BUSTR) Reynoldsburg, OH | BUSTR Chief and State Coordinators, Training Session | BUSTR RISK ASSESSMENT TRAINING Introductory Session | 8 hours |
| April 22, 1999 | Bureau of Underground Storage Tank Regulators (BUSTR) Reynoldsburg, OH | BUSTR Chief and State Coordinators, Training Session | BUSTR RISK ASSESSMENT TRAINING Second Session | 8 hours |
| May 6, 1999 | Bureau of Underground Storage Tank Regulators (BUSTR) Reynoldsburg, OH | BUSTR Chief and State Coordinators, Training Session | BUSTR RISK ASSESSMENT TRAINING Third Session | 8 hours |
| May 27, 1999 | Bureau of Underground Storage Tank Regulators (BUSTR) Reynoldsburg, OH | BUSTR Chief and State Coordinators, Training Session | BUSTR RISK ASSESSMENT TRAINING Fourth Session | 8 hours |
| June 4, 1999 | Bureau of Underground Storage Tank Regulators (BUSTR) Reynoldsburg, OH | BUSTR Chief and State Coordinators, Training Session | BUSTR RISK ASSESSMENT TRAINING Fifth Session | 8 hours |
| May 23, 2000 | Bureau of Underground Storage Tank Regulators (BUSTR) Reynoldsburg, OH | BUSTR Chief and State Coordinators, Training Session | Factors Influencing Tier 1 and Tier 2 Evaluations Training Session for New Rules | 8 hours |
| January 18, 2001 | Engineer's Club, Dayton, OH | ASHRAE, Dayton Chapter, Dinner Speaker | Energy and Cost Benefit Analyses of Heating, Ventilation and Air Conditioning Systems Available for Ohio Schools | 2 hours |

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

| DATE | LOCATION | AUDIENCE | TOPIC | DURATION (Hrs) |
|--------------------|--------------------------------|---|--|----------------|
| January 25, 2001 | Riffe Tower, Columbus, OH | Ohio School Facilities Commission, Ohio Department of Development, State School A/E's | Energy and Cost Benefit Analyses of Heating, Ventilation and Air Conditioning Systems Available for Ohio Schools | 7 hours |
| March 13, 2001 | Ashland Chemical, Columbus, OH | PDMA – Columbus Chapter, Breakfast Speaker | The Product Development Process - Case Studies | 1 hour |
| July 30, 2001 | Toledo, OH | City of Toledo, Environmental Director and Staff | Status of BUSTR's New Rule, March 31, 1999 | 2 hours |
| September 21, 2001 | Lexington, KY | ASHRAE Region VII & Bluegrass Chapter, Invited Luncheon Speaker | Energy and Cost Benefit Analyses of Heating, Ventilation and Air Conditioning Systems Available for Ohio Schools | 1.5 hour |
| November 13, 2001 | Wadsworth, OH | ASHRAE Akron Chapter, Dinner Speaker | Energy and Cost Benefit Analyses of Heating, Ventilation and Air Conditioning Systems Available for Ohio Schools | 2 hours |
| February 12, 2002 | Cincinnati, OH | ASHRAE Cincinnati Chapter, Lunch Speaker | Evaluation of Heating, Ventilation and Air Conditioning Systems (HVAC) Systems Available for Ohio Schools | 1.5 hours |
| July 2002 | Cleveland, OH | AIHA Luncheon Speaker | IAQ Cost – Benefit Analyses For Heating, Ventilation and Air Conditioning Systems (HVAC) Systems Available for Ohio Schools | 1.5 hours |
| September 24, 2002 | Columbus, OH | Ohio Builds 2002 | Evaluation of HVAC Systems Contained in the OSFC Design Manual | 1.5 hours |
| February 5, 2003 | Toledo, OH | ASHRAE Toledo Chapter, Dinner Speaker | Energy and Cost Benefit Analyses of Heating, Ventilation and Air Conditioning Systems Available for Ohio Schools | 2 hours |
| May 9, 2004 | Atlanta, GA | American Industrial Hygiene Conference and Expo (AIHce), Professional Development Course #418 | Mold Contamination: A Hands-On Workshop Addressing Inspection, Remediation Specifications, Project Oversight and Post-Remediation Assessment | 8 hours |
| September 14, 2004 | Gahanna, OH | Gahanna Board of Realtors Luncheon Speaker | Mold – After the Contract | 1 hour |

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

| DATE | LOCATION | AUDIENCE | TOPIC | DURATION (Hrs) |
|-------------------|-----------------|--|--|----------------|
| November 4, 2004 | Cincinnati, OH | Cincinnati Bar Association Luncheon Speaker | Mold – Facts/Fiction/Who Knows? | 2 hours |
| November 17, 2004 | Columbus, OH | Ohio Public Facility Maintenance Association (OPFMA) Annual Meeting | Impact of Temperature on Occupants: Theory vs. Reality | 1.5 hours |
| October 17, 2005 | Phoenix, AZ | LexisNexis Benzene Litigation Conference | How Low Can You Go? Measuring Exposure to Benzene | 1 hour |
| April 21, 2006 | Cleveland, OH | National Business Institute Proving Damages Caused by Mold Infestation in Ohio | Make a Mold Claim and Litigate the Case | 2 hours |
| November 9, 2006 | Columbus, OH | Bricker & Eckler Building Industry | Avoiding and Handling Mold Claims | 1 hour |
| June 3, 2008 | New Orleans, LA | Harris-Martin Benzene Conference | Historic Levels of Benzene in Products | 1 hour |
| August 14, 2009 | Columbus, OH | State Auto Insurance Company | Assessment of Hail and Wind Damage | 3 hours |
| December 4, 2009 | Akron, OH | Nationwide Insurance Company | Presentation and Seminar on Log Cabin Construction, Maintenance & Reparability | 2 hours |
| March 17, 2010 | Westerville, OH | Nationwide Insurance Company | Seminar on Impact of Wind & Hail Damage to Building Materials | 1 hour |
| May 9, 2012 | Dublin, OH | Grange Insurance Company | Lightning Damage Assessments | 3 hours |
| June 18, 2013 | Delaware, OH | Nationwide Insurance Company | Forensic Analysis of Fire Damage to Foundation Walls | 3 hours |

Mr. Stephen E. Petty, P.E., C.I.H., C.S.P

SUMMARY OF CLASSES TAUGHT AT FRANKLIN UNIVERSITY

By
Stephen Petty

| Class Title | Description | Term | Dates | # Students | Comments |
|--------------------|---------------------------|-------------|----------------------|-------------------|-----------------|
| SCIE131 Q1WW | Environmental Science 131 | Winter 2003 | 1/3/03 to 4/24/03 | 17 | Online class |
| SCIE131 E1FF | Environmental Science 131 | Summer 2003 | 5/21/03 to 6/25/03 | 13 | In-Class |
| SCIE114 F2FF | Earth Science 114 | Fall 2003 | 9/29/03 to 11/3/03 | 17 | In-Class |
| SCIE131 H1FF | Environmental Science 131 | Fall 2003 | 11/12/03 to 12/17/03 | 15 | In-Class |
| SCIE131 Q1WW | Environmental Science 131 | Summer 2004 | 05/17/04 to 08/07/04 | 14 | Online class |
| SCIE131 H1FF | Environmental Science 131 | Fall 2004 | 11/10/04 to 12/15/04 | 19 | In-Class |
| SCIE 131 H1FF | Environmental Science 131 | Fall 2005 | 11/9/05 to 12/14/05 | 19 | In-Class |
| SCIE 131 H1FF | Environmental Science 131 | Spring 2006 | 3/27/06 to 5/1/06 | ? | In-Class |

SCIE 114 – 4 Semester Credit Hours

SCIE 131 – 4 Semester Credit Hours

EXHIBIT ii

SUMMARY OF EXPERT WITNESS CASES – STEPHEN PETTY

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|--|---|----------------------------------|--|-------------|
| Mr. Luther L. Liggett Jr. Bricker & Eckler, L.L.P. 100 S. Third Street Columbus, OH 43215 | Construction Corporation vs. Roth Produce (Supported Plaintiff). Testified at hearing in Franklin County, OH. | Refrigerated Warehouse (Design Purpose – HVAC) Testified at Mediation Hearing | Settled in Arbitration | - / - | 2001 |
| Mr. Michael P. Giertz Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): Sandra D. Howell and Estate of Mr. Howell Defendant(s): Nalco, Bayer and David Hackathorn (Bayer's Director of Health) In the Circuit Court of Marshall County, West Virginia (Supported Plaintiffs) | Legionella Exposure at Chemical Plant Deposed by Defendant(s) 2003 | Negotiated Settlement | EES-2002-002 Case No. 00-C-234M | 2002 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): Donna E. Gwinn, Individually and Executrix of the Estate of William B. Gwinn Defendant(s): Chemical Leaman Tank Lines (CLTL), a Delaware Corporation, Quality Distribution, Inc., d/b/a Quality Carrier, Successor-in-Interest to Chemical Leaman Tank Lines, Inc., a Florida Corporation, and Okey Edens. In the Circuit Court of Marshall County, West Virginia. (Supported Plaintiffs). | Benzene Exposure at Tanker Truck Cleaning Facility Deposed on 3/21/2003 | Negotiated Settlement | EES-2002-040 Case No. 02-C-120M | 2002-2003 |
| Mr. Guy Bucci Attorney at Law Bucci, Bailey & Javins P. O. Box 3712 Charleston, West Virginia 25337 | Plaintiff(s): William Shaffer and Rosa Shaffer, husband and wife. Defendant(s): Monongahela Power Company d/b/a Allegheny Power as an Ohio Corporation In the Circuit Court of Pleasants County, West Virginia (Supported Plaintiff) | Legionella Exposure at Power Plant Settled 04/2004 | Negotiated Settlement | EES-2002-01 Cause No.: 00 -C-28 | 2001 - 2004 |
| Mr. James M. Barber Attorney at Law 604 Virginia Street, East Suite 200 Charleston, WV 25301 | Plaintiff(s): Daniel O. Dixon Defendant(s): A C & S, Inc. (Supported Plaintiff) | Acid Gas Exposure at Chemical Plant Settled 05/2004 | Negotiated Settlement | EES-2003-005 Cause No.: 02-C-1995 | 2003 - 2004 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): Michael A. Lebron, Pamela Lebron Defendant(s): Shell Oil Company; Amoco Oil Company; Union Oil Company of California; Radiator Specialty Company; PPG Industries, Inc.; E.I. Du Pont de Nemours & Company and Bondo Corporation. (Supported Plaintiffs) | Benzene Exposure from Paint and Service Station Operations Deposed by Defendant(s) on 11/21/03 | Negotiated Settlement 03/2009 | EES-2002-052 Cause No.: 01L10021 | 2002-2009 |

Page 2

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|---|--|---------------------------------------|---|-----------|
| Mr. Brian Bradigan Attorney At Law Brian J. Bradigan, L.L.C. 3948 Townsfair Way Suite 230 Columbus, OH 43219 | Plaintiff(s): Jeffrey and Theresa Vaughn (Homeowners) Defendant(s): Timberline Log Homes (Grange Insurance – Builder's Insurance) (Supported Defendant) | Mold and Water Leaks in Log Home Due to Poor Construction | Negotiated Settlement | EES-2003-019 - | 2003 |
| Ms. Joanne Peters Attorney At Law Isaac, Brant, Ledman & Teetor LLP 250 E. Broad St. Suite 900 Columbus, OH 43215-3742 | Plaintiff(s): Fisher (Homeowners) Defendant(s): Muth and Company – Roofing Company (Supported Defendant) | Mold and Water Leaks in Home Due to Roof Installation | Negotiated Settlement | - / - | 2003 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): Timothy J. Farley Defendant(s): Keystone Shipping Company, Margate Shipping Company and Chilbar Shipping Company Shipping Company Court of Common Pleas Philadelphia County, PA Civil Action - Law (Supported Plaintiff) | Benzene and other Chemical Exposures from Working on Tankers | Negotiated Settlement 8/09/2004 | EES-2003-180 Cause No.: 0957 | 2003-2004 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): David Ball Defendant(s): BASF, Corp., Ford Motor Company, 3M Company, Petroleum Traders Company, Myers Industries, Inc., d/b/a Patch Rubber Co., Radiator Specialty Company, Locitte Corporation, and Lykins Oil Company Court of Common Pleas Cuyahoga, Ohio (Supported Plaintiff) | Benzene and other Chemical Exposures Focus on Labeling and MSDS sheets | Negotiated Settlement 12/2005 | EES-2003-217 Cause No.: CV-02-473352 | 2003-2005 |
| Voltoni & Voltoni Attorneys at Law 1350 West Fifth Ave. Suite 214 Columbus, OH 43212 | Plaintiff: Janis Weekly Defendant(s): Terminix Pre-Lawsuit (Supported Plaintiff) | Duriban - Chlorpyrifos (Pesticide) Exposure Completed detailed inspection and research. | Completed | EES-2003-352 Cause No: 94- 018 | 2003-2004 |
| Harvit & Schwartz, L.C. 2018 Kanawha Blvd., E. Charleston, WV 25311 | Plaintiff: Robert H. Casdorph, Jr and Melba Casdorph, his wife Defendant(s): West Virginia State Police, an agency of the State of West Virginia, and Castle Products, Inc., a New York Corporation. In the Circuit Court of Marshall County, West Virginia (Supported Plaintiff) | CML-Chronic Myelogenous Leukemia | Negotiated Settlement 11/2011 | EES-2003-329 Cause No.: 03-C-109M Worker's Comp. Decision Appealed to WV Supreme Ct. – Decision in | 2003-2011 |

Page 3

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|---|---|--|--|-------------|
| | | | | Favor of Plaintiff on 11/9/2019 | |
| Dinsmore & Shohi, LLP 255 E. Fifth Street, Suite 1900 Cincinnati, OH 45202 | Plaintiff: Doug Kinslow Defendant(s): M.E.B. Two (Supported Defendant) | Mold Contamination Inspection, mold testing and detailed findings report | Negotiated Settlement | EES-2003-353 Cause No.: 3780-88 | 2003-2004 |
| Mr. Scott Sheets Attorney At Law Isaac, Brant, Ledman & Teetor LLP 250 E. Broad St., Suite 900 Columbus, OH 43215-3742 | Plaintiff: Stanger (Homeowners) Defendant(s): Davis Fine Homes – Homebuilder (Supported Plaintiff) | Mold and Water Inspection, Testing, and Support | Negotiated Settlement | EES-2003-366 | 2003 |
| Mr. J. Andrew Crawford Reese, Pyle, Drake & Meyer, P.L.L. 36 N. Second Street P.O. Box 919 Newark, OH 43058-0919 | Plaintiff: Murray Headlee et al. Defendant(s): Truberry Group, Inc. et al. (Homebuilder) Delaware, OH County Court of Common Pleas (Supported Defendant) | Mold and Water Leaks in Home; Prepared outline of opinions. | Negotiated Settlement on/about 03/08/2004 | EES-2003-405 Cause No.: 03 CVH 01007 | 2003 - 2004 |
| Mr. J. Zackary Zatezalo Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Mr. James V. Dollhopf and Kristin L. Dollhopf Defendant(s): PPG Industries, Sherwin-Williams Company, Ashland, Inc., CIBA Specialty Chemicals, Chem-Pak Solutions, General Fiberglass Supply, Inc., Meguiar's Products, Sunnyside Corporation, Milwaukee Paint, Inc. State of Wisconsin Circuit Court Milwaukee County (Supported Plaintiff) | Benzene and other Chemical Exposures from Painting Operations | Negotiated Settlement | EES-2003-407 Cause No.: 03-CV-4832 | 2003-2004 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Shelly Gray, Individually and as Plaintiff Ad Litem for Sherri Bond, deceased. Defendant(s): BP Corporation North America Inc. and BP Products North America Inc. et al – Former American Oil Company (AMOCO) Site Circuit Court of Jackson County, Missouri, at Independence. (Supported Plaintiff) | Benzene and other Chemical Exposures from Underground Piping and Tank Leaks | Negotiated Settlement 03/16/2006 | EES-2003-415 Case No.: 02-CV-229538 | 2003-2006 |
| Mr. J. Michael Prascik Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600, Wheeling, WV 26003 | Plaintiff: Mr. Barry Hovis and Lesa Hovis, his wife. Defendant(s): Carboline Company, Rust-Oleum Corporation, E.I. DuPont de Nemours and Company, Valspar Coatings, One Shot, LLC, PPG Industries, Inc., Sherwin-Williams, . In the Circuit Court of Common Pleas in York County, South Carolina. (Supported Plaintiff) | Exposure to Paint | Negotiated Settlement 10/2004 | EES-2004-049 Cause No.: 2003-CP-46- 165 | 2004 |
| Mr. J. Michael Prascik Hartley & O'Brien, P.L.L.C. The Wagner Building | Plaintiff: Lucinda Cutlip Defendant(s): West Virginia Department of Transportation, Division of Highways, and Guttman Oil Company, a foreign | Exposure to Diesel Exhaust | Testified in Trial 1/10/06 | EES-2004-066 | 2004-2006 |

Page 4

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|---|--|--|---|-------------|
| 2001 Main Street, Suite 600, Wheeling, WV 26003 | corporation In the Circuit Court of Kanawha County West Virginia (Supported Plaintiff) | Deposed by Defendant(s) on 08/11/2005 and 09/21/2005 | Decision in Favor of Defendant | Cause No.: 02-C-2345 | |
| Mr. Kris Cormany Attorney at Law Bucci, Bailey & Javins P. O. Box 3712 Charleston, West Virginia 25337 | Plaintiff: Erby E. Lester and Donna Lester, his wife Defendant(s): Elk Run Coal Company, Inc. a West Virginia Corporation d/b/a Black Castle Mining Company, Spartan Mining Company, a West Virginia Corporation and d/b/a Trace Transport Company. In the Circuit Court of Boone County West Virginia. (Supported Plaintiff) | Exposure to Combustion Products From Fire in Maintenance Building Deposed by Defendant on 03/01/2006 | Negotiated Settlement 05/10/2006 | LAW-2004-009 Cause No.: 04-C-231 | 2004 - 2006 |
| Mr. Guy R. Bucci Bucci Bailey & Javins Suite 910 Bank One Center, 707 Virginia Street, East, Charleston, WV 25301 | Plaintiff: Linda Kitzmiller Defendant(s): Jefferson Supply Co. United States District Court For the Northern District of West Virginia, Elkins Division (Supported Plaintiff) | Exposure to Chemicals Deposed by Defendant(s) 06/06/2006 Daubert Hearing 10/30/2006 – Motion Denied | Negotiated Settlement 11/05/2007 | LAW-2004-010 Cause No.: 2:05-CV-22 | 2004 - 2007 |
| Mr. Chris Wilson Wilson, Frame, Benninger & Metheney, P.L.L.C. | Plaintiff: Paula J. Ondo Defendant(s): TBD (Supported Plaintiff) | Mold and HVAC | Completed Report Submitted | EES-2004-134 | 2004 |
| Mr. J. Michael Prascik Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Mr. Douglas Bates Defendant(s): The Dow Chemical Company et al. (Supported Plaintiff) | Chemical Exposure - Various products in garage | Closed | EES-2004-137 Cause No.: 3:03CV519BN | 2005-2009 |
| Mr. J. Michael Prascik Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600, Wheeling, WV 26003 | Plaintiff: Deborah Trojan Defendant(s): Peoples Gas Light & Coke Co. (Supported Plaintiff) | Benzene Exposure From Former Manufactured Gas Plant Site Deposed by Defendant 11/12/2004 | Negotiated Settlement 12/2004 | EES-2004-135 Cause No.: 01 L 16472 | 2004 |

Page 5

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|--|---|--|---|-------------|
| Charles Cooper Charles Cooper Law Offices 407 Center Street Ironton, OH 45638 | Plaintiff: Mr. and Mrs. Shelton Defendant(s): Mr. and Mrs. LeMaster (Supported Plaintiff) In response to Grange Claim #: HP91871 (Supported Defendant) | Mold and Water Damage | Closed | LAW-2004-004 | 2004-2005 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Mr. Robert Scherer Defendant(s): S & S Automotive, Inc. et al. (Supported Plaintiff) | Benzene Exposure Deposed by Defendant(s) 11/11/2004 | Negotiated Settlement 11/2005 | LAW-2004-001 Cause No.: 02 L 435 | 2004-2005 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Mr. Earl Douglas Defendant(s): Ashland, Inc. et al. (Supported Plaintiff) | Benzene Exposure Deposed by Defendant(s) 03/29/2005 Daubert Hearing 01/13/2006 – Motion Denied | Negotiated Settlement 04/2008 | LAW-2004-002 Cause No.: 01/CE-00392 | 2004-2008 |
| Mr. Guy R. Bucci Bucci Bailey & Javins Suite 910 Bank One Center, 707 Virginia Street, East, Charleston, WV 25301 | Plaintiff: Brummage et al. Defendant(s): Thrasher et al. (Supported Plaintiff) | Mold and Bacteria Exposures/Sewage System Failure (Two expert reports written late 2004 and early 2005). | Negotiated Settlement 09/2005 | LAW-2004-003 | 2004-2005 |
| Mr. William M. Owens Owens & Manning 413 Main Street, 2nd Floor Coshocton, OH 43812 | Plaintiff: Ms. Delaine Freeman Defendant(s): Randy Stotts et al. (Supported Plaintiff) | Mold Determination | Negotiated Settlement 10/2004 | LAW-2004-005 Cause No.: 02 CI 588 | 2004 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Mr. Terry Defendant(s): Go-Mart Inc. et al. (Supported Plaintiff) | Benzene Exposure Deposed by Defendant(s) 8/20/2009 | Negotiated Settlement 9/2010 | LAW-2004-006 | 2004-2010 |
| Mr. David J. Romano Romano Law Office 363 Washington Avenue Clarksburg, WV 26301 | Plaintiff: Cathy A. Arnett Representative of John P. Arnett (Deceased) Defendant(s): The Marmon Corporation et al. (Supported Plaintiff) | Hazardous Chemical Exposure – Cleaners with Sodium Hydroxide | Negotiated Settlement 02/14/2005 | LAW-2004-007 Cause No.: 03-C-570-2 | 2004 - 2005 |

Page 6

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|---|--|--|---|-------------|
| Mr. Stephen Brown Mundy & Nelson, L.L.C. P.O. Box 2986 Huntington, WV 25728 | Plaintiffs: TBD – Citizens of Huntington Defendant: TechSol (Supported Plaintiff) | Hazardous Chemical Exposure – Coal Tar Containing Benzene – Sampled Creek and Homes for VOCs | Negotiated Settlement 11/2006 | LAW-2004-011 | 2004 - 2005 |
| Mr. Paul Eklund Davis & Young 1700 Midland Building 101 Prospect Avenue West Cleveland, OH 44115-1027 | Plaintiffs: Enrico M. Clark and Cynthia Clark Defendant(s): Alchem Corporation and B. George Bufkin (Supported Defendant) | Hazardous Chemical Exposure – Methanol and Acid Gases | Negotiated Settlement 07/2006 | LAW-2004-014 Cause No.: 528128 | 2004 - 2006 |
| Mr. Brian Bradigan Attorney At Law Brian J. Bradigan, L.L.C. 3948 Townstair Way, Suite 230 Columbus, OH 43219 | Plaintiffs: Wanner Searls (Homeowner) Defendant(s): Grange Mutual Casualty Company Franklin County Ohio Court of Common Pleas (Supported Defendant) | Hail Damage to Home | Testified in Trial 04/18/2005 Decision in Favor of Defendant(s) 05/31/2005 | EES-2004-094 | 2004 - 2005 |
| Mr. Lon Walters Partner The Walters Law Firm The Oldham Building 105 East 5th Street Suite 401 Kansas City, MO 64106 | Plaintiff: Estate of Nancy Ryan Defendant(s): BP Corporation, American Oil Company, et al. Circuit Court of Jackson County, Independence, MO (Supported Plaintiff) | Benzene/Chemical Exposures from Underground Piping and Tank Leaks and Vapor Emissions | Testified in Trial 08/24-25/2005 Jury Ruled in Favor of Plaintiff(s) – 09/14/2005 | LAW-2004-012 Cause No.: 04CV223271 | 2004 - 2005 |
| Mr. John Davis Gallagher, Sharp, Fulton & Norman 1501 Euclid Avenue, Seventh Floor Cleveland, OH 44115 Mr. Charles Williams 555 South Front Street, Suite 320 Columbus, OH 43215 | Plaintiff: Hidden Lakes Condominium Association Defendant: Acuity Insurance Company (Umpire – Supported Defendant) | Hail Damage Appraisal Umpire Claim #: KL3009 Unimpred Decision and Report Issued 04/2005 | Completed | EES-2005-020- S | 2005 |
| Mr. Nicholas Subashi Subashi, Wildermuth & Ballato The Oakwood Building 2305 Far Hills Avenue Dayton, OH 45419 Mr. Randall Saunders Nationwide Insurance Company 620 Morrison Road Gahanna, OH 43230 | Plaintiff: James Wilson et al. Defendant: STO Corp., Jack H. Wieland Builders, Daytonco- James, Inc. et al. (Supported Defendant – Roofing Contractor) | Construction Defect Claims Claim #: 92 34 AC 324909 03011997 51 Provided Inspection, Analysis and 3 reports on liability of roofing contractor. | Completed Negotiated Settlement 06/30/2005 | EES-2005-050- S Cause No.: 03 CV 61596 | 2005 |

Page 7

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|--|---|-------------------------------------|---|-------------|
| Mr. James M. Barber Attorney at Law 604 Virginia Street, East Suite 200 Charleston, WV 25301 | Plaintiff: Lola Hudson Defendant: Arbors Management and Rock Branch Mechanical (Supported Plaintiff) | Legionella Exposure Deposed 12/13/2005 | Closed | Law-2005-001 | 2005 - 2006 |
| Mr. J. Zachary Zatezalo Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Little Defendant: American Electric Power (Supported Plaintiff) | Solvent Exposure Deposed by Defendant 03/25/2011 | Negotiated Settlement 2011 | LAW-2005-002 Cause No.: 03-C-256M | 2005-2011 |
| Mr. Guy R. Bucci Bucci Bailey & Javins Suite 910 Bank One Center, 707 Virginia Street, East, Charleston, WV 25301 | Plaintiff: Mr. Daniel A. Wilson and Mrs. Joyce L. Wilson Defendant: Mr. Raymond Johnson d/b/a Ray's Auto Center (Supported Plaintiff) | Hazardous Chemicals Exposure | Closed | LAW-2005-006 Cause No.: 04- C-232 | 2005-2007 |
| Mr. Michael P. Gierzt Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Janice Weekley Defendant: Terminix International Company (Supported Plaintiff) | Property Contamination from Termiticides (Pesticides) Deposed by Defendant 09/09/2005 | Negotiated Settlement 11/2005 | LAW-2005-007 Cause No.: 52-181-00697- 04 | 2005 |
| Mr. Bradley R. Oldaker Bailey, Sultz, Oldaker & Greene P.O. Drawer 1310 Weston, WV 26452-1310 | Plaintiff: Mack O. Crist Defendant: Vicellio & Grogan et al. (Supported Plaintiff) | Silica- Exposure – Highway Construction Deposed by Defendant 01/17/2006 | Negotiated Settlement 05/2006 | LAW-2005-008 Cause No.: 04C-64M | 2005-2006 |
| Mr. J. Zachary Zatezalo Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Jayne Chianelli and estate of Frank Chianelli Defendant(s): Shell Oil Company, Potter Paint Co., Mohawk Finishing Products, Phipps Products Corp., BIX Manufacturing Company, Sherwin Williams Company, Barnett Industries and E.E. Zimmerman (Supported Plaintiff) | Solvent Exposure | Negotiated Settlement 2006 | LAW-2005-009 Cause No.: 03 12999/ | 2005-2006 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Denny Morris Defendant: PPG Industries, Inc. (Supported Plaintiff) | Benzene Exposure Deposed by Defendant 10/12/2005 | Closed | LAW-2005-010 Cause No.: 99-C-173M | 2005-2009 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|---|---|--|---|-----------|
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building Suite 600 2001 Main Street, Wheeling, WV 26003 | Plaintiff: Thomas H. Ware and Pamela S. Ware, his wife Defendant: Pratt & Whitney Engine Services, Inc. In the Circuit Court of Harrison County, West Virginia (Supported Plaintiff) | Hazardous Chemicals Exposure | Negotiated Settlement 01/2006 | LAW-2005-011 Cause No.: 05-C-139-1 | 2005-2006 |
| Ms. Sandra Spurgeon Spurgeon & Tinker, PSC 120 Prosperous Place, Suite 202 Lexington, KY 40509 | Robert A. Tompkins, et al v. Wheeling-Pittsburgh Steel Corporation d/b/a Wheeling Corrugating Company, Inc., et al v. Terry Roland (Supported Defendant - Insurance Company) | Exposure | Closed | LAW-2005-013 | 2005-2008 |
| Mr. Louis H. Watson, Jr., P.A. Attorney at Law 520 Capitol Street Jackson, Mississippi 39201-2703 | Plaintiff: Fay Lundy and Joel Lundy Defendant: Cibur Truck Lines, Inc., Conoco, Inc., Individually, a/k/a Conoco Gas and Marketing, a Division of Conoco, Inc., and f/k/a Du Pont Holdings, Inc; ConocoPhillips Company; "John Doe" Defendant(s) In the United States District Court for the Southern District of Mississippi Jackson Division (Supported Plaintiff) | Exposure to benzene from gasoline Deposed by Defendant 9/20/2006 | Negotiated Settlement | LAW-2005-014 2005-16 Case No. 2005- 16 | 2005-2007 |
| Mr. Michael P. Gierzt Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Pauline Poling Defendant: Grafton Auto Parts Circuit Court of Marshall County, West Virginia (Supported Plaintiff) | Exposure to Benzene Containing Solvents | Negotiated Settlement | LAW-2005-016 Case #: 05-C- 157M | 2005-2009 |
| Mr. Thomas E. Schwartz Holloran White & Schwartz LLP 2000 S. 8 th Street St. Louis, Missouri 63104 | Plaintiff: Jeff Morgan Defendant: National Railroad Passenger Corporation (Supported Plaintiff) | Diesel Exhaust Exposure Deposed by Defendant 01/31/2006 | Negotiated Settlement 04/28/2006 | LAW-2005-018 Cause No.: 052-08718 | 2005-2006 |
| Mr. Richard A. LaVerdiere Sieben Polk LaVerdiere & Dusich 999 Westview Drive Hastings, MN 55033-2495 | Plaintiff: Vettrus Defendant: Ashland Chemical et al. Third Judicial District Court, County of Rice, MN (Supported Plaintiff) | Exposure to solvents containing benzene Deposed by Defendant(s) 03/20/2007 | Closed | LAW-2005-019 C5-05-1909 | 2005-2008 |
| Mr. Kevin George 931 Vauxhill Lane Powell, OH 43065 | Plaintiff: Mallory Pools Defendant: Mr. Kevin George Delaware County, Ohio Court of Common Pleas (Supported Defendant) | Pool chemistry and staining on Liner. Testified in Trial (Delaware County Court) 01/19/2006 | Decision in favor of Defendant | EES-2006-166 | 2005-2006 |
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 | Plaintiff: Benoit Defendant: Ato Fina et al. | Exposure to benzene and benzene containing solvents in | Closed | LAW-2005-020 | 2005-2007 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|---|---|-------------------------------------|--|-----------|
| Dallas, TX 75219 | 18th Judicial District Court, For the Parish of Iberville, State of Louisiana (Supported Plaintiff) | refineries and chemical plants | | Cause No.: 62116, Div. A | |
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiffs: Stubbs & Wilkinson (two cases). Ms. Ann Stubbs, representing the estate of Ben L. Stubbs Herbert W. Wilkinson and Peggy S. Hebert Defendant(s): Radiator Specialty Company et al. 128th Judicial District Court, Orange County, TX (Supported Plaintiff) | Exposure to benzene & benzene-containing solvents- refineries, chemical plants Deposed by Defendant(s) 3/29/06 and 4/25/06 | Negotiated Settlement | LAW-2005-021 & BAR-2006-001 Stubbs/Wilkinson - Cause No.: A-030272C | 2005-2007 |
| Mr. Thomas E. Schwartz Holloran White & Schwartz LLP 2000 S. 8th Street St. Louis, Missouri 63104 | Plaintiff: Ursula Michelle Creaghan and Daniel Aaron Creaghan as surviving children of Steven Francis Creaghan Defendant: Superior Solvents & Chemicals, Inc.; Transchemical Inc., Ashland, Inc., Chemisphere Corp., Reichhold, Inc. Akzo Nobel Coatings, Inc., Brenntag Mid-South, Inc., Eastman Chemical Co., and Shell Oil Company (Supported Plaintiff) | Benzene exposure from paint manufacturing Deposed by Defendant on 8/29/2006 | Negotiated Settlement 9/2006 | LAW-2005-022 Cause No.: 042-07417 | 2005-2007 |
| Mr. Lon Walters The Walters Law Firm The Oldham Building 105 East 5th Street, Suite 401 Kansas City, MO 64106 | Plaintiff: Detel Defendant: BP Corporation North America, Inc., and BP Products North America, Inc. Circuit Court of Jackson County, Independence, MO (Supported Plaintiff) | Benzene exposure Deposed by Defendant on 9/11/2006 | Negotiated Settlement 10/18/2006 | WAL-06-001 Cause No.: 04CV207637 | 2005-2006 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Richard C. Smith and Vickie Smith Defendant(s): Sal Chemical Company, Inc., Chemical Solvents, Inc., and United States Can Company Circuit Court of Brooke County, WV (Supported Plaintiff) | Organic Chemical Exposure Deposed by Defendant(s) 02/06/2007 | Negotiated Settlement 06/2007 | HAR-2006-002 Cause No.: 05-C-211 AMR | 2006-2007 |
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiffs: Troy Lucas Defendant(s): Diamond Shamrock, Marathon, U.S. Steel, WD-40, Radiator Specialty, ConocoPhillips and Occidental Chemical 23rd Judicial District Court, Brazoria County, TX (Supported Plaintiff) | Exposure to benzene and benzene containing solvents while working for Diamond Shamrock | Closed | BAR-2006-002 Cause No. 35,311 | 2006-2007 |
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiffs: Donna Cashiola, Page Defendant(s): American Petroleum Institute, Inc. et al. 298th Judicial Court, Dallas, TX (Supported Plaintiff) | Exposure Deposed by Defendant 9/22/2006 | Decision in favor of Defendant | BAR-2006-005 Cause No.: 04-00545 | 2006-2008 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|---|--|-------------------------------------|---|-----------|
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiff: David Carpenter Defendant(s): Spray Products Corp. et al. Circuit Court of Cook County, Chicago, Illinois (Supported Plaintiff) | Benzene Exposure | 2007 | BAR-2006-006 Cause No.: 2006L00673 | 2006-2007 |
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiffs: Larry Koger (deceased) and Kim Koger Defendant(s): Ashburn Industries et al. 128th Judicial District Court, Orange County, TX (Supported Plaintiff) | Exposure to benzene and benzene containing solvents while working for EBBA Iron | Negotiated Settlement | BAR-2006-007 Cause No.: A050388-C | 2006-2007 |
| Mr. Kirk Claunich Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiffs: Bekkelund Defendant(s): General Tire, Shell, Specialty Radiator 23rd Judicial District Court, Brazoria County, TX (Supported Plaintiff) | Exposure to benzene and benzene containing solvents Deposed by Defendant 3/13/2007 | Negotiated Settlement | BAR-2006-009 Cause No.: 24038*BJ03 | 2006-2008 |
| Mr. Andrew DuPont Locks Law Firm 1500 Walnut Street, 20th Floor Philadelphia, PA 19102 | Plaintiff: Kirk Jenkins Defendant(s): (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 2008 | LOC-2006-001 | 2006-2008 |
| Mr. Bradley Oldaker Bailey, Stultz, Oldaker & Green P.O. Drawer 1310 Weston, West Virginia 26452 | Plaintiffs: William K. Stern et al. Defendant(s): Chemtal Incorporated et al. Circuit Court of Marshall County, West Virginia (Supported Plaintiff) | Exposure to Polyacrylamide Flocculant with Residual Acrylamide Monomer. | Negotiated Settlement | OLD-2007-001 Cause No.: 03- C-49M | 2004 |
| Mr. Lon Walters The Walters Law Firm The Oldham Building 105 East 5th Street, Suite 401 Kansas City, MO 64106 | Plaintiff: Sean Reed Defendant(s): B.P. Corporation North America, Inc., and BP Products North America, Inc. et al. Circuit Court of Jackson County, Missouri at Independence (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement | WAL-2007-001 Cause No.: 04CV-209341 | 2007 |
| Mr. John Hughes The Law Offices of John J. Hughes 1200 Gough Street, Suite 1 San Francisco, CA 94109 | Plaintiff: Daniel F. Dean as administrator of the estate of William J. Dean Defendant(s): Overseas Shipbuilding Group (OSG) Ship Management, Inc., Juneau Tanker Group, Inc., Cambridge Tankers, Inc., OMI Corp., InterOcean Ugland Management, Inc., and SL Service, Inc. Superior Court of the State of California, County of San Francisco (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 04/2008 | HUG-2007-001 Cause No.: CGC-04- 430986 | 2007-2008 |
| Mr. Jim Waldenberger Kline & Specter The Nineteenth Floor | Plaintiff: Karen Horvat, Estate of Andrew J. Horvat, Deceased, et al. | Benzene Exposure | Negotiated Settlement | WAL-2007-001 | 2007-2012 |

Page 11

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|---|-------------------------------------|--|--|-----------|
| 1525 Locust Street Philadelphia, PA 19102 | Defendant(s): Crane Oil Company et al. Superior Court of New Jersey Gloucester County (Supported Plaintiff) | | 01/2012 | Cause No.: GLO-000497-07 | |
| Mr. J. Keith Hyde Ms. D'Juana Parks Provost & Umphrey, L.L.P. 490 Park Street P.O. Box 4905 Beaumont, TX 77704 | Plaintiff: Jan Goss. Individually and as Representative of the Estate of Velma Church, Deceased, et al. Defendant: Schering-Plough Corp. 4th Judicial Court, Rusk County, State of Texas (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 04/2008 | PAR-2007-001 Cause No.: 2006-232 | 2007-2008 |
| Bradley R. Oldaker Bailey, Stultz, Oldaker & Greene P.O. Drawer 1310 Weston, West Virginia 26452 | Plaintiff: Estate of Darren Patrick Brake Defendant: TKS Contracting Circuit Court of Upshur County, West Virginia (Supported Plaintiff) | Wrongful Death Forklift Accident | Negotiated Settlement 02/2008 | OLD-2007-002 Case No.: 07-C- 155 | 2007-2008 |
| Mr. John Langdoc Baron & Budd Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiff: Edward Paul Wick Defendant(s): 3M Company et al. Court of Common Pleas Philadelphia County (Supported Plaintiff) | Asbestos | Negotiated Settlement 02/2009 | BAR-2007-004 Cause No.: 0512-2989 | 2007-2009 |
| Mr. Lon Walters The Walters Law Firm The Oldham Building 105 East 5th Street, Suite 401 Kansas City, MO 64106 | Plaintiff: Paul Hedrick & Joyce Hedrick Defendant: BP Corporation North America Inc. and BP Products North America Inc. – Former American Oil Company (AMOCO) Site Circuit Court of Jackson County, Missouri at Independence (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement | LON-2007-002 Cause No.: 04CV-209360 – Div. 16 | 2007 |
| Mr. Lon Walters The Walters Law Firm The Oldham Building 105 East 5th Street, Suite 401 Kansas City, MO 64106 | Plaintiff: Barbara Behymer, individually and as Plaintiff Ad Litem for Richard Behymer, deceased Defendant: BP Corporation North America Inc. and BP Products North America Inc. – Former American Oil Company (AMOCO) Site. Circuit Court of Jackson County, Missouri at Independence. (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 03/07/2008 | LON-2007-003 Cause No.: 04CV238342 | 2007-2008 |
| Mr. Chuck Gordon Hubbell Peak O'Neal Napier & Leach Law Firm Union Station 30 W. Pershing Rd., Suite 350 Kansas City, MO 64108 | Plaintiff: Robert L. Almager Defendant: The Burlington Northern & Santa Fe Railway Company City Court of the City of St. Louis, State of Missouri (Supported Plaintiff) | Railroad Worker PAH Exposure | Negotiated Settlement 08/16/2008 | HUB-2007-001 Cause No.: 052-10081 | 2007-2008 |
| Mr. Gregory A. Lofstead Richardson, Patrick, Westbrook & Brickman, LLC 174 East Bay Street Charleston SC 29401 | Plaintiff: Dennie Polk Defendant: Brooks Run Coal Company et al. Circuit Court of Mingo County, West Virginia (Supported Plaintiff) | Silicosis | Negotiated Settlement 01/2008 | RPWB-2007- 001 Cause No.: 04- C-650 | 2007-2008 |

Page 12

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|--|--|----------------------------------|--------------------------------------|-----------|
| Mr. Gregory A. Lofstead Richardson, Patrick, Westbrook & Brickman, LLC 174 East Bay Street Charleston SC 29401 | Plaintiff: Ricky G. Prince and Diana Prince Defendant: Eastern Associated Coal Corp. et al. Circuit Court of Mingo County, West Virginia (Supported Plaintiff) | Silicosis | Negotiated Settlement 05/2008 | RPWB-2007-002 Cause No.: 04-C-289 | 2007-2008 |
| Mr. James Zury The Law Offices of James C. Zury 450 Alkyre Run Drive, Suite 120 Westerville, OH 43082 | Defendant: Ohio Builders, Inc. and Mr. David B. Holbert, President Plaintiff: Rick and Karen Upchurch (Supported Defendant) | Mold Contamination | Negotiated Settlement 01/2008 | SUR-07-001 | 2007-2008 |
| Mr. Thomas E. Schwartz Holloran White & Schwartz LLP 2000 S. 8 th Street St. Louis, Missouri 63104 | Plaintiff: Paula Dangerfield Defendant: BP Corp. North America, Inc. et al. Third Judicial Circuit Court, Madison County, State of Illinois (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 2014 | SCH-07-001 Case #: 08-L-1032 | 2007-2014 |
| Mr. James Billings Zacks Law Firm 33 S. James Road Columbus, OH 43213 | Plaintiff: Joseph Pingue Defendant: Able Roofing Franklin County, Ohio Court of Common Pleas (Supported Plaintiff) | Roofing/Water Infiltration Testified in Trial 6/9/2008 | Decision in Favor of Plaintiff | ZAC-08-001 | 2008 |
| Mr. Thomas E. Schwartz Holloran White & Schwartz LLP 2000 S. 8 th Street St. Louis, Missouri 63104 | Plaintiff: Tricia Mary Iraci and the Estate of Giacomo Iraci Defendant(s): Heritage-Crystal Clean, LLC, Superior Solvents & Chemicals, Inc., Citgo Petroleum Corporation, Sunoco, Inc., The Valvoline Company and 3M Company Circuit Court of Cook County Illinois County Department, Law Division (Supporting Plaintiff) | Benzene Exposure Deposed by Defendant(s) 5/04/2011 | - | SCH-2008-001 Case No.: 05 L 7528 | 2008 |
| Mr. Thomas E. Schwartz Holloran White & Schwartz LLP 2000 S. 8 th Street St. Louis, Missouri 63104 | Plaintiff: Tomas Fields Defendant: The Alton & Southern Railway Company Circuit Court – St. Clair County, IL (Supported Plaintiff) | Railroad Diesel and Benzene Exposure Deposed by Defendant(s) 3/16/2010 | Negotiated Settlement 8/2010 | SCH-2008-003 Cause: 06L 308 | 2008-2010 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Elmer B. Haymond and Norma Haymond Defendant(s): Moore North American, Inc. et al. Circuit Court of Marshall County, WV (Supported Plaintiff) | Organic Chemical Exposure | Negotiated Settlement | HAR-2008-001 Cause No.: 04-C-211 | 2008 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|--|---|-------------------------------------|---|-----------|
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff: Daniel E. Emery and Liselle Emery Defendant(s): Shell Oil Company, Individually and d/b/a Shell Chemical Company and as Successor-by-Merger to Pennzoil-Quaker State Company, a Delaware Corporation, Pennzoil-Quaker State Company, C. E. Bradley Laboratories, Inc., Exxon Mobil Corporation, Safety-Kleen Systems, Inc., f/k/a Safety-Kleen Corp., The Coleman Company, Inc., Cleveland Lithochrome, Company, Inc., Minnesota Mining and Manufacturing Company (3-M), Miles Supply Company, Inc., Granite City Tool Company of Vermont, Inc., Intertape Polymer Corp. State of Vermont, Washington County, SS (Supporting Plaintiffs) | Benzene Exposure Deposed by Defendant(s) 7/21/2010 | Negotiated Settlement | HAR-2008-002 Cause No. 80-2-09 WNCV | 2008 |
| Mr. Karl Novak Richardson, Patrick, Westbrook & Brickman, LLC 174 East Bay Street Charleston SC 29401 | Plaintiff(s): Debra Herzog, Individually and as Administrator of the Estate of Kent Herzog, Deceased, for the use and benefit of Surviving Next of Kin, Debra Herzog (Surviving Spouse), Ryan Herzog, and Heather Ragan (Surviving Children) Defendant(s): Tex-Trim, Inc.; Sunnyside Corp.; E.I. DuPont De Nemours and Company; Superglue Corp.; The Savogran Company; RPM Wood Finishes Group; Inc., Wilsonart International, Inc., WD-40 Company, W.M. Barr & Co., Inc., DAP, Inc.; Mohawk Finishing Products, Inc.; The Glidden Co., D/B/A ICI Paints; OSI Sealants, Inc.; Do it Best Corp.; Henkel Consumer Adhesives; Inc., Henkel Corp., Individually and as successor to Henkel Locktite Corp.; Sovereign Specialty Chemicals; Henkel Consumer Adhesives, Inc., OSI Sealants, Inc., and Formica Corp.; IPS Corp. (formally Industrial Polychemical Service); Franklin International, Inc. (formerly Franklin Glue); Camie-Campbell, Inc. (formerly Camie Co.); and Camie-Campbell International, Inc. Circuit Court of the Third Judicial Circuit, Madison County, Illinois (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 02/2010 | RPWB-2008-001 Cause No.: 207-L-538 | 2008-2010 |
| Mr. Robert Black Heard, Robins, Cloud & Lubel, LLP 3800 Buffalo Speedway, 5th Floor Houston, Texas 77098 | Plaintiff(s): Walter Mairose, Individually and as Executor of the Estate of Mae I. Mairose et al. Defendant(s): The Dow Chemical Company et al. Circuit Court for Baltimore City, County of Baltimore, State of Maryland (Supported Plaintiff) | Vinyl Chloride Exposure | Negotiated Settlement 08/2008 | HRCL-2008-001 Case No.: 24-C-06-011110 | 2008 |
| Mr. Keith Patton Shrader & Associates | Plaintiff(s): John Davis Ward, et al. Defendant(s): Citizens Gas & Coke Utility | Benzene Exposure | Negotiated Settlement | SCHM-08-001 Cause No.: | 2008 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|---|---|-------------------------------|---|-----------|
| 3900 Essex Lane, Suite 390 Houston, TX 77027 | Marion County Superior Court, State of Indiana (Supported Plaintiffs) | | 05/2008 | 49D03-0701- CT-002020 | |
| Mr. Gene Egdorf The Lanier Law Firm 6810 FM - 1960 West Houston, Texas 77069 | Plaintiff(s): Judy A. Bates, individually and as Personal Representative of the Heirs and Estate of Loren G. Bates, Deceased, et al. Defendant(s): Shintech, Inc. et al. United States District Court for the Western District of Missouri (Supported Plaintiff) | Vinyl Chloride Exposure | Negotiated Settlement 2008 | LAN-08-001 Cause No.: 06-0944-CV-W-GAF | 2008-2008 |
| Mr. Zach Zatezalo Bordas & Bordas, PLLC 1358 National Road Wheeling, West Virginia 26003 | Plaintiff(s): Mr. Joe Berry Charlton, Vicki Charlton (wife), and Shasta Charlton (daughter) Defendant: Wheeling-Pittsburgh Steel Corp. West Virginia Worker's Compensation Office of Judges & Brooke County Circuit Court (Supported Plaintiffs) | Coke Oven Gases and Heat Exposure Deposed by Defendant 05/10/2011 | Negotiated Settlement 2012 | BOR-08-003 Claim #: 2006204793 Cause No.: 07-C-119 | 2008-2012 |
| Mr. Andrew J. DuPont Locks Law Firm The Curtis Center 601 Walnut Street, Suite 720 East 170 South Independence Mall West Philadelphia, Pennsylvania 19106 | Plaintiff(s): Michael Cardello and Tracy Cardello, his wife Defendant: CRC Industries, Inc. et al. Court of Common Pleas of Allegheny County, State of Pennsylvania (Supporting Plaintiffs) | Benzene Exposure | - | LOC-08-001 Cause No. GD-05-029307 | 2008 |
| Mr. Robert Black Heard, Robins, Cloud & Lubel, LLP 3800 Buffalo Speedway, 5th Floor Houston, Texas 77098 | Plaintiff(s): Robert B. Oakley (Deceased) and Irene Oakley Defendant(s): Air Products and Chemicals, Inc., Aristech Chemical Corporation; Atlantic Richfield Company, BP Corporation of America, Inc., BP Products North America, Inc., BP Amoco Chemical Company, Occidental Chemical Corporation, Radiator Specialty Company, United States Steel Corporation, and USX Corporation U.S. District Court for the Eastern District of Texas Marshall Division (Supported Plaintiff) | Benzene Exposure 11/25/2008 - Defendant(s) motion to exclude Petty testimony denied. | Negotiated Settlement 12/2008 | HRCL-08-002 Case No.: 2:07-CV-00351 | 2008 |
| Mr. Robert Black Heard, Robins, Cloud & Lubel, LLP 3800 Buffalo Speedway, 5th Floor Houston, Texas 77098 | Plaintiff(s): Gerald Diaz (deceased) and Deborah Diaz Defendant(s): Handschy Industries, Inc., E.I. DuPont de Nemours & Co., et al. In the District Court, Orange County, 128th Judicial District Court (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 8/2012 | HRCL-08-003 Cause No.: A-070037DC | 2008-2012 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building | Plaintiff(s): Mr. Richard Gordon Defendant(s): Texaco Marine Services, Inc. et al. | Benzene Exposure | Negotiated Settlement 08/2011 | HAR-08-005 | 2008-2011 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|---|---|---|---|-----------|
| 2001 Main Street, Suite 600 Wheeling, WV 26003 | United States District Court for the District of New Jersey (Supported Plaintiff) | Deposed by Defendant(s) 6/28/2011 | | Cause No. 09 CV-911 (JAG) | |
| Mr. Keith Patton Shrader & Associates 3900 Essex Lane, Suite 390 Houston, TX 77027 | Plaintiff(s): Mr. Raul Zendejas and Araceli Zendejas. Defendant(s): Shell Oil Company, Shell Chemical, LP, Individually and as Successor-in-interest to Shell Chemical Corporation, ConocoPhillips Company, Von Verde Citrus Packing House, Inc., an Arizona corporation; Von Verde Harvesting, Inc., a dissolved Arizona corporation; and Von Verde Citrus Growers Cooperative, Inc a dissolved Arizona Corporation In the Superior Court of the State of Arizona in and for the County of Maricopa (Supported Plaintiffs) | Benzene Exposure Deposed by Defendant(s) 9/23/2009 Trial Testimony 11/9- 10/2009 | Decision in Favor of Defendant(s) 11/19/2009 | SCHM-08-002 Cause No.: CV-2007- 005399 | 2008-2009 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): Bonnie L. Mallory, Executrix of the Estate of Robert E. Mallory, Deceased Defendant(s): Goodyear Tire & Rubber Company, Akron, OH, et al. Court of Common Pleas, Summit County, Ohio (Supported Plaintiff) | Benzene Exposure Deposed by Defendant(s) 10/21/2009 | Negotiated Settlement 2010 | HAR-08-006 2007-11-8033 Case No.: CV07-11-8033 | 2008-2010 |
| Mr. Raphael Metzger Metzger Law Group 401 E. Ocean Blvd., Suite 800 Long Beach, CA 90802 | Plaintiff(s): Thomas Wayne Reese Defendant: Gans Ink & Supply Co., and Does 1 through 200, Inclusive Superior Court of the State of California for the County of Los Angeles – Central District (Supported Plaintiff) | Benzene Exposure Deposed by Defendant 7/7/2009 | Negotiated Settlement 05/2010 | MET-08-001 Case No.: BC332936 | 2008-2010 |
| Mr. Guy Bucci Bucci, Bailey & Javins 213 Hale Street Charleston, WV 25301 | Plaintiff(s): Michael Schmidt Defendant: Bayer Corporation, Bayer Material Science LLC, John Cool, Terry Eddy, Charles "Buddy" Kotson and John Long Circuit Court of Marshall County, West Virginia 7/28/2008 2 nd Amended Complaint Filed (Supported Plaintiff) | TDI Exposure Deposed by Defendant 02/03/2010 and 06/03/2010 | Negotiated Settlement 09/2012 | BUC-07-001 Case No.: 08-C-121-K | 2007-2012 |
| Mr. Thomas E. Schwartz Holloran White & Schwartz LLP 2000 S. 8 th Street St. Louis, Missouri 63104 | Plaintiff(s): Suzanne Schaefer, Individually and as Special Administrator of the Estate of Richard D. Schaefer, Deceased Defendant: The Premcor Refining Group, Inc. formerly known as Clark Refining & Marketing, Inc. and formerly known as Clark Oil & Refining Corporation, and Illinois Petroleum Company, Inc. and Texor Petroleum Company, | Benzene Exposure | - | SCH-08-005 Case No.: 06 L 578 | 2008 |

Page 16

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|---|--|-------------------------------------|---|-----------|
| | Inc., and Parent Petroleum, Inc. Circuit Court of Will County, State of Illinois (Supporting Plaintiff) | | | | |
| Ms. Kelly McMeekin Paul & Hanley 1608 Fourth Street, Suite 300 Berkeley, CA 94710 | Plaintiff(s): Julie (Judy) Murray, Individually and as Successor-In-Interest to Erica Murray Defendant: Chevron Corporation; Union Oil Company of California; Greka Oil & Gas, Inc.; Drilling & Production Co.; ConocoPhillips, Kerr-McGee Corporation; Anadarko Petroleum Corporation, Key Energy Group, Inc. and DOES 2- 210 Superior Court of the State of California, County of Los Angeles (Supported Plaintiff) | Benzene Exposure Deposed by Defendant(s) 10/28- 29/2009 | Closed 2010 | PAU-08-001 Case No.: YCO56221 | 2008-2010 |
| Mr. Michael P. Gierzt Hartley & O'Brien, PLLC The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): Douglas E. Fedor Defendant: Norfolk Southern Railway Co. (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 11/2008 | HAR-08-007 Case No.: CV-08-652069 | 2008 |
| Mr. Robert Black Heard, Robins, Cloud & Lube, LLP 3800 Buffalo Speedway, 5th Floor Houston, Texas 77098 | Plaintiff(s): Candis L. Snyder, individually, and as the Personal Representative of the Estate of William Luther Clark, Deceased; Patricia L. Clark, Shelley K. Winfrey and Kerry A. Clark, individually and as the Wrongful Death Beneficiaries of the Estate of William Luther Clark, Deceased Defendant: E.I. DuPont De Nemours and Company, Inc., PPG Industries, Inc., Sherwin Williams Company, BASF Corp., Wesco Group, Inc. U.S. Steel/Aristech Chemical Corp., Radiator Specialty Company, Sunoco, Inc., The Glidden Company and ICI Americas, Inc. Superior Court of the State of Washington in and for the County of King (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 7/2010 | HRCL-08-004 Case No.: 07-2-27647- 5SEA | 2008 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): Christopher R. Searce and Angela W. Searce, his wife Defendant(s): The Sherwin-Williams Company; Abercrombie Oil Company, Inc.; Hutchens Petroleum Corporation; UNIVAR USA, Inc.; Caswell Auto Parts, LLC; Texaco, Inc.; Chemtek, Incorporated, Travelers Insurance Company and Key Risk Management Services. North Carolina Industrial Commission, Raleigh, North Carolina; State of North Carolina In the General Court of Justice Superior Court, Division, Caswell County (Supporting Plaintiff) | Benzene Exposure Deposed by Defense 10/28/2010 Testified before the North Carolina Industrial Commission 8/11/10 | Negotiated Settlement | HAR-08-004 Cause No.: 08-CVS-420 | 2008 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|--|---|-------------------------------------|---|-----------|
| Mr. Keith Patton Shrader & Associates 3900 Essex Lane, Suite 390 Houston, TX 77027 | Plaintiff(s): George Oliver Tanner, Individually and as Independent Administrator of the Estate of Jimmie Wayne Tanner, Deceased Defendant: ExxonMobil Corporation et al. In the United States District Court for the Southern District of Texas Houston Division (Supported Plaintiff) | Benzene Exposure | - | SHR-09-001 Cause No.: 01-16849-001 | 2009 |
| Mr. Guy Bucci Bucci, Bailey & Javins 213 Hale Street Charleston, WV 25301 | Plaintiff(s): Ricky J. Carman Defendant: Bayer Corporation, Bayer Material Science LLC, John Cool, Terry Eddy, Charles "Buddy" Kotson and John Long Circuit Court of Marshall County, West Virginia (Supported Plaintiff) | TDI Exposure Deposed by Defendant(s) 02/03/2010 | Negotiated Settlement 08/2010 | BUC-09-001 Case No.: 08-C- 269K | 2009-2010 |
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiff(s): Michael Malcontento Defendant: Court of Common Pleas, Philadelphia County, November Term, 2006, No: 0632 (Supported Plaintiff) | Asbestos Exposure | Negotiated Settlement 2010 | BAR-09-002 Case No.: 26035 Asbestos | 2009-2010 |
| Mr. Keith Patton Shrader & Associates 3900 Essex Lane, Suite 390 Houston, TX 77027 | Plaintiff(s): Ms. Barbara Way and Estate of Mr. James Way Defendant: Ashland, Inc., Exxon Mobil Corporation, Shell Oil Company, Chevron U.S.A., Inc., Goodrich Corporation, and Parker Hannifan Corporation In the Court of Common Pleas, Cuyahoga County, Ohio (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 2010 | SHR-09-002 Cause No.: CV 09 683084 | 2009-2010 |
| Mr. Robert Black Heard, Robins, Cloud & Lubel, LLP 3800 Buffalo Speedway, 5th Floor Houston, Texas 77098 | Plaintiff(s): Lewis E. Knapper and Linda Knapper Defendant: Safety-Kleen Systems, Inc., Aristech Chemical Corp., Radiator Specialty Company, Sunoco, Inc. (R&M), United States Steel Corporation, and USX Corporation. U.S. District Court for the Eastern District of Texas Lufkin Division (Supported Plaintiffs) | Benzene Exposure Deposed by Defendant 07/16/2009 11/16/2009 - Defendant(s) motion to exclude Petty testimony denied. | Negotiated Settlement 02/2010 | HRCL-09-001 Civil Action No: 9:08-cv-0084 | 2009-2010 |
| Mr. Robert Black Heard, Robins, Cloud & Lubel, LLP 3800 Buffalo Speedway, 5th Floor Houston, Texas 77098 | Plaintiff(s): Linda Denise Smith and Estate of Wesley Fred Smith, Deceased et al. Defendant: E.I DuPont De Nemours and Company, Inc., PPG Industries Inc., Sherwin Williams Company, BASF Corporation, Akzo Nobel Coatings, Inc. United States District Court for the Eastern District of Texas, | Benzene Exposure | Negotiated Settlement 6/2010 | HRCL-09-002 Cause No.: 08-CV-385 | 2009-2010 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|--|--|--|--|-----------|
| | Beaumont Division (Supported Plaintiff) | | | | |
| Mr. Robert Black Heard, Robins, Cloud & Lubel, LLP 3800 Buffalo Speedway, 5 th Floor Houston, Texas 77098 | Plaintiff(s): Fred Cantu and Ruth Cantu Defendant: BP Amoco Chemical Company et al. In the District Court of Galveston Texas, 56 th Judicial District (Supported Plaintiffs) | Benzene Exposure | Dismissed 2010 | HRCL-09-003 Cause No.: 07 CV 0594 | 2009-2010 |
| Mr. Robert Black Heard, Robins, Cloud & Lubel, LLP 3800 Buffalo Speedway, 5 th Floor Houston, Texas 77098 | Plaintiff(s): Darla J. Lemaire, Individually, and as the Independent Executrix of the Estate of Michael Lemaire, Deceased et al. Defendant: Berryman Products, Inc.; Delaware USS Corporation, Huntsman Petrochemical Corporation, Radiator Specialty Company, Texaco Chemical Company, Texaco, Inc., United States Steel Corporation, and USX Corporation 172nd Judicial District of Jefferson County, Texas (Supported Plaintiff) | Benzene Exposure Deposed by Defendant(s) 10/13/2009 | Negotiated Settlement 10/31/2009 | HRCL-09-007 Cause No.: E-178,440 | 2009 |
| Mr. Andrew DuPont Locks Law Firm 1500 Walnut Street, 20 th Floor Philadelphia, PA 19102 | Plaintiff(s): Ryan Glenn Davis and Evan Scott H. Davis, Executors of the Last Will and Testament of Ronald Davis, Deceased. Defendant(s): Sunoco, Inc. (R&M) f/k/a Sun Company, Inc., Radiant Specialty Company, United States Steel Corp., Insilco Technologies, Inc., Eastman Kodak Co., The Sherwin- Williams Co., et al. Court of Common Pleas, Philadelphia County (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 2011 | LOC-2009-002 Cause No.: 090301835 | 2009-2011 |
| Mr. Andrew DuPont Locks Law Firm The Curtis Center 601 Walnut Street, Suite 720 East Philadelphia, Pennsylvania 19106 | Plaintiff(s): Richard Ascani Defendant: E.I. Du Pont Nemours & Company, BASF Corp, SM Co., Safety-Kleen Systems, Inc., et al. Supreme Court of the State of New York, County of Kings (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 2010 | LOC-09-003 Cause No.: 12061-09 | 2009-2010 |
| Mr. Andrew DuPont Locks Law Firm The Curtis Center 601 Walnut Street, Suite 720 East Philadelphia, Pennsylvania 19106 | Plaintiff(s): Joann Grandpre, Individually and as the Administratrix of the Estate of Anthony Grandpre, Deceased; Treva Cadres, Trina Kohlman and Troylise Grandpre, Individually and as the Beneficiaries of the Estate of Anthony Grandpre, Deceased Defendant: PPG Industries, Inc., PPG Industries Ohio, Inc., PPG Coatings, Inc., E.I. DuPont de Nemours & Co., DuPont Performance Coatings, Inc. Individually and as Successor-In- Interest to Spies Hecker, Inc., DuPont Automotive Products, Inc., Spies Hecker, Inc., BASF Corporation, BASF Coatings AG, Individually and Successor-In-Interest to Inmont Corporation, BASF-Inmont Corporation, BASF Corporation- | Benzene Exposure | Negotiated Settlement 2010 | LOC-09-004 Cause No. 2004-4180, Division J, Section 13 | 2009-2010 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|---|-------------------|----------------------------------|--|-----------|
| | Inmont Division, The Sherwin-Williams Company, Inc., Sherwin-Williams Automotive Finishes Corp., Illinois Tool Works, Inc. Individually and Successor-In-Interest to Fibre Glass-Evercoat Company, Inc., Crescent City Color, Tarride Color Service, Inc., Tarride Sale, Inc., Automotive Paint & Trimming Supply Company, Inc., Linda's Hip Hop Auto Paint & Supply Shop, LLC. Civil District Court for the Parish of New Orleans, State of Louisiana (Supported Plaintiff) | | | | |
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiff(s): Dolores Juliano, as Executrix of the Estate of John Juliano Defendant: A.W. Chesterton Company, et al. In the Court of Common Pleas Philadelphia County, PA. (Supported Plaintiff) | Asbestos Exposure | Negotiated Settlement 2012 | BAR-09-003 Cause No.: 001905 | 2009-2012 |
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiff(s): Leroy Thompson Defendant: A.W. Chesterton Company, et al. In the Court of Common Pleas Philadelphia County, PA. (Supported Plaintiff) | Asbestos Exposure | Negotiated Settlement 2009 | BAR-09-004 | 2009 |
| Mr. Robert Black Heard, Robins, Cloud & Lubel, LLP 3800 Buffalo Speedway, 5th Floor Houston, Texas 77098 | Plaintiff(s): Susan Stevenson, Jordan W. Stevenson and Amy S. Fontenot, Individually, and as Heirs to the Estate of James Edward Stevenson Defendant: Bayer Corporation, Successor in Interest to Miles, Inc., Denka Chemical, Mobay Corporation and Mobay Chemical Company; Atofina Petrochemicals, Inc. individually and formerly known as American Petrofina Company of Texas and Fina Oil and Chemical Company; Chevron Chemical Company; Chevron U.S.A. Incorporated, individually and as successor in interest to Gulf Oil Corporation; Chevron Phillips Chemical Company, LLC; Chevron Phillips Chemical Company LP; Conoco, Inc., individually a/k/a Conoco Gas and Marketing, a Division of Conoco, Inc., and formerly known as Du Pont Holdings, Inc.; ConocoPhillips Company; E.I. DuPont de Nemours and Company, Inc.; ExxonMobil Oil Corporation, individually, f/k/a Mobil Oil Corporation, and a/k/a Mobil Chemical Company, a Division of ExxonMobil Oil Corporation; Fina Oil and Chemicals; Fina, Inc.; Goodyear Tire & Rubber Company; Great Lakes Carbon Corporation; Mobil Chemical Company, Inc., individually and f/k/a Mobil Chemical Corporation; Radiator Specialty Company; United States Steel Corporation, individually, f/k/a United States Steel LLC, and | Benzene Exposure | Negotiated Settlement 02/2010 | HRCL-09-008 Case No.: A-040211-C | 2009 |

Page 20

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|--|--|-----------------------------------|--|-----------|
| | f/k/a USX Corporation; and USX Corporation, individually, f/k/a U.S. Steel Company, f/k/a United States Steel Corporation and as a subsidiary of Marathon Oil Company 128th Judicial District Court, Orange County, Texas (Supported Plaintiffs) | | | | |
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiff(s): Stephen J. Kolar and Carol Kolar Defendant: Buffalo Pumps, Inc. et al. Philadelphia County Court of Common Pleas Civil Trial Division (Supported Plaintiffs) | Asbestos Exposure | Negotiated Settlement 2010 | BAR-09-005 Case No.: 000199 Asbestos | 2009-2010 |
| Ms. Denyse Clancy Baron & Budd, P.C. 3102 Oak Lawn Ave., Suite 1100 Dallas, TX 75219 | Plaintiff(s): Earl J. Goodhart and Betty R. Goodhart h/w Defendant: Garlock Sealing Technologies, et al. In the Court of Common Pleas Philadelphia County, PA (Supported Plaintiffs) | Asbestos Exposure | Negotiated Settlement 03/2010 | BAR-2009-006 Case No.: 0000436 Asbestos | 2009-2010 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): John M. Ashworth and Johnnie M. Hord, Individually and Executrix of the Estate of Anthony T. Hord, deceased Defendant(s): The Goodyear Tire & Rubber Company et al. Court of Common Pleas, Summit County, Ohio (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement May 2010 | HAR-09-001 Case No.: 2008-10-7361 | 2009-2010 |
| Mr. R. Dean Hartley Hartley & O'Brien, P.L.L.C. The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): Johnnie M. Hord, Individually and Executrix of the Estate of Anthony T. Hord, deceased and John M. Hord Defendant(s): The Goodyear Tire & Rubber Company et al. Court of Common Pleas, Summit County, Ohio (Supported Plaintiff) | Benzene Exposure Deposed by Defendant(s) 07/07/2010 | Negotiated Settlement 12/2010 | HAR-09-001 Case No.: 2008-10-7361 | 2009-2010 |
| Mr. Ted Gianaris Simmons Attorneys At Law 707 Berkshire Blvd. P.O. Box 521 East Alton, IL 62024 | Plaintiff(s): Tristan Tolloty, a minor, by his next friends and parents, Brian Tolloty and Jessica Tolloty Defendant(s): Republic Services, Inc. Republic Services of Ohio, II, LLC, Waste Management, Inc., and Waste Management of Ohio, Inc. In the Court of Common Pleas, Stark County, Ohio (Supported Plaintiffs) | Benzene Exposure | Resolved 7/2012 | SIM-09-001 Case No.: BC 416990 | 2009-2012 |
| Mr. Andrew DuPont Locks Law Firm 1500 Walnut Street, 20 th Floor Philadelphia, PA 19102 | Plaintiff(s): Kenneth Roberts and Helen Jean Roberts, his wife. Defendant: Sunoco, Inc. (R&M) f/k/a Sun Company, Inc. and f/k/a Sun Oil Company, Inc., etc. Court of Common Pleas, Philadelphia County | Benzene Exposure | Negotiated Settlement 3/2012 | LOC-09-005 Case No.: 3320 | 2009-2012 |

Page 21

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|--|---|--|---|-----------|
| | (Supported Plaintiffs) | | | | |
| Mr. Greg Lofstead Richardson, Patrick, Westbrook & Brickman, LLC 1017 Chuck Dawley Blvd. Mt. Pleasant, SC 29464 & Mr. Timothy C. Bailey Bucci Bailey & Javins LC PO Box 3712 Charleston, WV 25337 | Plaintiff(s): Clarence J. Dorsey and Susan Dorsey Defendant: Copperas Coal Corporation; Hunter Ridge Coal Company, f/k/a Anker Energy Corporation; Brooks Run Mining Company, LLC; Fossil Fuels, Inc.; and Kingston Mining, Inc. Circuit Court of Nicholas County, West Virginia (Supported Plaintiffs) | Silica Dust Exposure Deposed by Defendant(s) 09/10/2010 | Negotiated Settlement 9/10/2010 | RPWB-10-001 Case No.: 09- C-36 | 2010-2010 |
| Mr. Raphael Metzger Metzger Law Group 401 E. Ocean Blvd., Suite 800 Long Beach, CA 90802 | Plaintiff(s): Laura Hammond, individually and as Guardian ad Litem of Minors Rachel Hammond and John Hammond; Craig Hammond; Elizabeth Wust; Marissa Stockreef; Stephanie Head, and Geoffrey Head Defendant: Chevron Corporation; Chevron USA, Inc.; Angeles Chemical Co., Inc.; Ashland Inc.; Ashland Oil, Inc.; Bortz Oil Co., Inc.; Chemcentral Corp; The Dow Chemical Company; E.I. Du Pont de Nemours and Company; Shell Oil Company; SOCO West Inc.; Union Carbide Corporation and Univar USA Inc. Superior Court of the State of California for the County of Los Angeles – Central District (Supported Plaintiffs) | Benzene Exposure Deposed by Defendant(s) 5/27/2010 Testified in Trial 01/26/2011 | Decision in Favor of Defendant 2/2011 | MET-10-001 Case No.: BC 358265 | 2010-2011 |
| Mr. Robert Black Heard Robins Cloud & Black 9 Greenway Plaza, Suite 2300 Houston, Texas 77046 | Plaintiff(s): Patricia A. McClurg, Individually and as the Representative of the Estate of Duard Wayne McClurg, Deceased and Terena McClurg Defendant(s): Ingram Barge Company, Savogran Company, W.M. Barr Company, Inc., et al. United States District Court, Eastern District of Texas, Beaumont Division (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 11/2010 | HRCB-10-002 Case No.: 1:09-CV-00504 | 2010 |
| Mr. Andrew DuPont Locks Law Firm 1500 Walnut Street, 20 th Floor Philadelphia, PA 19102 | Plaintiff(s): John J. Mull, III, and Renee Crimmins, H/W Defendant: The Sherwin Williams Company; M.A. Bruder & Sons, Inc.; Urbanik Paint & Wallpaper Co., Inc.; Tremec, Inc.; Benjamin Moore & Co. Duron Paints & Wallcoverings; Texaco, Inc.; ChevronTexaco Corp.; Getty Petroleum Marketing, Inc. f/k/a Getty Realty Corp. f/k/a Power Test Corp.; Lukoil Americas Corp; Mikecon Corp.; Exxon Mobil Corp; Getty Realty Corp. and John Doe Corporations One through Ten (1-10) Superior Court of New Jersey, Law Division – Camden | Benzene Exposure Deposed by Defendant(s) 03/17/2011 | Negotiated Settlement 5/17/2011 | LOC-10-001 Case No.: CAM-L-884-07 | 2010-2011 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|---|---|--|---|-----------|
| | County (Supported Plaintiffs) | | | | |
| Mr. Keith Patton Shrader & Associates, L.L.P. 3900 Essex Lane, Suite 390 Houston, TX 77027 | Plaintiff(s): Sharon Claytor, Personal Representative of the Estate of Rick D. Lewis; and Hilarie Lewis, Heir of Rick D. Lewis Defendant: Rebel Oil Company, a Nevada Corporation; Kinder Morgan Energy Partners, L.P.; ConocoPhillips Company; Shell Chemical Company; Chevron U.S.A., Inc.; Tosco Corporation; Tosco Refining Company; BP Products North America, Inc. and Atlantic Richfield Company District Court, Clark County, Nevada (Supported Plaintiffs) | Benzene Exposure | Testified in Trial 09/27-28/2011 Decision in Favor of Plaintiff 10/2011 Decision Confirmed by the Supreme Court of Nevada 12/16/2014 | SHR-10-001 Case No.: A566869, Dept. XVII | 2010-2011 |
| Mr. Darren Brown Provost Umphrey Law Firm, LLP 490 Park Street Beaumont, Texas 77701 | Plaintiff(s): Monte McWilliams Defendant(s): Exxon Mobil Corporation et al. 14th Judicial District Court, Parish of Calcasieu, State of Louisiana, Division E (Supported Plaintiff) | Benzene Exposure | Decision in Favor of Plaintiff 02/2012 | PRO-10-001 Cause No.: 2009-002803 | 2010-2012 |
| Mr. Keith Patton Shrader & Associates, L.L.P. 3900 Essex Lane, Suite 390 Houston, TX 77027 | Plaintiff(s): Richard Czuprynski Defendant: The Kansas City & Southern Railway Company Circuit Court of Jackson County, Missouri (Supporting Plaintiff) | Benzene from Benzene-Containing Products Deposed by Defendant 11/29/2011 | Dismissed | SHR-11-001 Cause No.: 1016-CV06186, Division No. 4 | 2011-2012 |
| Mr. Greg Coolidge Metzger Law Group 401 E. Ocean Blvd., Ste. 800 Long Beach, CA 90802 | Plaintiff(s): Steven Billing et al. Defendant(s): Azko Nobel Paints, LLC et al. Superior Court of the State of California for the County of Los Angeles (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 01/2012 | MET-11-001 Case No.: BC 416990 | 2011-2012 |
| Mr. Brian Madden Wagstaff & Cartmell, LLP 4740 Grand Avenue, Suite 300 Kansas City, MO 64112 | Plaintiff(s): Charles Ross and Rocio Ross Defendant(s): Chevron Phillips Chemical Company, LP; Chevron Phillips Chemical Holdings II, LLC; and Chevron Phillips Chemical Company, LLC. District Court of Montgomery County, Texas, 284th Judicial District (Supported Plaintiffs) | Benzene Exposure Deposed by Defendant(s) 04/24/2012 | Negotiated Settlement 03/2012 | WAG-11-001 Case No.: 10-02-01901- CO | 2011-2012 |

Page 23

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|--|--|----------------------------------|---|-----------|
| Mr. Keith Hyde Provost Humphrey P.O. Box 4905 Beaumont, Texas 77704 | Plaintiff(s): Jo Beth Allen and Lisa Wolfe, Surviving Children of Joe Allen, Deceased Defendant(s): Texaco, Inc., Chevron USA, Inc. and Atlantic Richfield Company In the District Court, Jefferson County, Texas, 60th Judicial District (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 03/2012 | PRO-11-001 Cause No. B-186,652 | 2011-2012 |
| Ms. Jo Anna Pollock Simmons Attorneys At Law 707 Berkshire Blvd. P.O. Box 521 East Alton, IL 62024 | Plaintiff(s): City of Roxana Defendant(s): Shell Oil Company, Equilon Enterprises, LLC d/b/a Shell Oil Products, US, a Corporation, ConocoPhillips Company, WRB Refining LP, ConocoPhillips WRB Partner, LLC, and Cenovus GPCP, LLC. The Circuit Court Third Judicial Circuit Madison County, IL (Supported Plaintiffs) | Benzene Exposure Deposed by Defendant(s) 11/05/2015 | Negotiated Settlement 2016 | SIM-11-001 Case No.: 3:12-cv-00336 GDM-PMF | 2011-2016 |
| Mr. Brad Oldaker Bailey, Stultz, Oldaker & Greene 122 Court Avenue Weston, WV 26452 | Plaintiff(s): Ralph E. Taylor, Kathy Taylor, individually and in their capacity as guardian and next friend of Jane Doe, a minor. Defendant(s): E.I. Du Pont & Company, a Delaware Corporation, KBR, Inc., a Delaware Corporation, BE&K Construction Company, L.L.C., a Delaware Corporation and Debra Hartman, an Individual. In the Circuit Court of Kanawha County, West Virginia. (Supported Plaintiff) | Safety (Scaffold Incident) | Negotiated Settlement 09/2012 | OLD-11-001 Case No. 11-C-1713 | 2011-2012 |
| R. Dean Hartley Hartley & O'Brien, PLLC The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): Cynthia L. Gunto, Individually and as Executrix of the Estate of Michael T. Gunto, deceased. Defendant(s): PPG Industries, Inc. Circuit Court of Marshall County, West Virginia (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 03/2013 | HAR-11-001 Case No.: 09 C 260K | 2011-2013 |
| Mr. Gary L. Hall Smith, Rolfe & Skaydahl Co., LPA 600 Vine Street, Suite 2600 Cincinnati, OH 45202 | Plaintiff(s): Rex A. Absher and Cosetta Absher Defendant(s): State Auto Insurance Company of Ohio In the Court of Common Pleas Lawrence County, Ohio. (Supported Insurance Company - Defendant) | Formaldehyde Exposure Deposed by Plaintiffs 02/09/2012 | Decision in Favor of Plaintiff | STE-12-001 Case No.: 10-OC-908 | 2011-2012 |
| Dr. Herschel L. Hobson Hobson & Bradley Attorneys At Law 2190 Harrison Beaumont, TX 77701 | Plaintiff(s): William P. Hite and Patricia A. Hite Defendant(s): Apex Oil Company, Inc., Valero Energy Corp., successor in interest to Clark Oil Company and Premcor, Inc. et al. Circuit Court of Cook County Illinois, County Department, Law Division | Benzene Exposure Deposed by Defendant(s) 04/02/2013 | Negotiated Settlement 2/2014 | HOB-11-001 Case No.: 09 L 4510 | 2011-2014 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|---|---|-------------------------------------|--|-----------|
| | (Supported Plaintiff) | | | | |
| Mr. Ted Gianaris Simmons Attorneys At Law 707 Berkshire Blvd. P.O. Box 521 East Alton, IL 62024 | Plaintiff(s): James and Betty Cox Defendant(s): Shell Oil Company, Equilon Enterprises, LLC d/b/a Shell Oil Products, US, a Corporation, ConocoPhillips Company, WRB Refining LP, ConocoPhillips WRB Partner, LLC, and Cenovus GPCP, LLC. (Supported Plaintiffs) | VOC Exposure Site Visit, Interview and Report | Resolved Pre- Litigation 2014 | SIM-12-001 | 2012-2014 |
| Mr. Keith Hyde Provost Humphrey P.O. Box 4905 Beaumont, Texas 77704 | Plaintiff(s): Claude W. Shute & Arthur Earl Holmes Defendant(s): Citgo Petroleum Company; Canadianoxy Offshore Production Co.; ConocoPhillips Company; ExxonMobil Corporation; Chevron U.S.A., Inc.; Texaco, Inc.; Fina, Inc.; GATX Corporation; Crown Petroleum Corporation; Shell Oil Company; Hartford Accident & Indemnity Company; Century Indemnity Company and Lloyds of London In the 14th Judicial District Court of Calcasieu Parish, Louisiana (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 09/2012 | PRO-12-001 Cause No.: 2010-003436 "E" | 2012 |
| Mr. Andrew DuPont Locks Law Firm The Curtis Center 601 Walnut Street, Suite 720 East 170 South Independence Mall West Philadelphia, Pennsylvania 19106 | Plaintiff(s): Sondra Krem, Individually and as Executrix of the Estate of Joseph J. Krem Defendant(s): BP Corporation North America, Inc., Atlantic Richfield Company, Sunoco, Inc. (R&M) f/k/a Sun Company, Inc., Radiator Specialty Company, United States Steel Corporation, Safety-Kleen Systems d/b/a Safety-Kleen, Safety-Kleen Corp. in its own right and d/b/a Safety-Kleen Systems, Inc., The Pep Boys-Manny, Moe & Jack, The Berkebile Oil Company, Inc. and CRC Industries, Inc. In the Court of Common Pleas of Philadelphia County, Pennsylvania – Civil Division (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 11/2012 | LOC-12-001 Case No.: 01913 | 2012 |
| Mr. Andrew J. Stern Kline & Specter 1525 Locust Street Philadelphia, PA 19102 | Plaintiff(s): Ruben Grigoryants and Mariana Grigoryants Defendant(s): Safety-Kleen Systems d/b/a Safety-Kleen, Safety-Kleen Corp. in its own right and d/b/a Safety-Kleen Systems, Inc. In the United States District Court for the Western District of Pennsylvania (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 04/2016 | KLI-12-001 Case No.: 1:11-cv-00267- SJM | 2012-2016 |
| Mr. Andrew DuPont Locks Law Firm The Curtis Center 601 Walnut Street, Suite 720 East 170 South Independence Mall West | Plaintiff(s): David Gerchman and Teresa Gerchman Defendant(s): Berryman Products, Inc.; CRC Industries, Inc., Ford Motor Company, Locrine Corporation n/k/a Henkel Corporation, Illinois Tool Works, Inc., solely as successor-in- interest to Permatex, Inc.; Radiator Specialty Company; | Benzene Exposure Deposed by Defendant(s) on July 16, 2012. | Negotiated Settlement 08/2012 | LOC-12-002 Case No. VC060106 | 2012-2012 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|--|---|-------------------------------------|---|-----------|
| Philadelphia, Pennsylvania 19106 | United States Steel Corporation, Safety-Kleen Corp., Safety-Kleen Systems, Inc., 3M Company; E.I. DuPont de Nemours & Company; Sea Foam Sales Company; Justice Brothers, Inc.; Hanson Merrill Corporation a/k/a Ernie's Auto Parts and Henkel Corporation In the Superior Court of the State of California for the County of Los Angeles, Southeast District (Supported Plaintiffs) | | | | |
| Mr. Thomas E. Schwartz Holloran White & Schwartz LLP 2000 S. 8 th Street St. Louis, Missouri 63104 | Plaintiff(s): Jeannette Platt, as the surviving wife of Decedent Lawrence Platt, Lukas Platt and Zachary Platt, as the surviving children of Decedent, Loretta Platt, as the surviving mother of Decedent, and Francis Platt, John Platt and Edward Platt, as the surviving siblings of Decedent Defendant(s): BASF Corporation, D&A Distributing, Inc., E.I. DuPont de Nemours & Company, Link Motor Supply Company, Inc., PPG Industries, Inc., and the Sherwin Williams Company In the Circuit Court of St. Louis County, State of Missouri (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 02/2013 | SCH-12-001 Case No.: 10SL-CC01305 | 2012-2013 |
| Mr. Keith Hyde Provost Humphrey P.O. Box 4905 Beaumont, Texas 77704 | Plaintiff(s): Billy Smallwood & George C. Washington Defendant(s): Exxon Mobil Corporation et al. In the 136 th Judicial District Court of Jefferson County, Texas (Supported Plaintiffs) | Benzene Exposure Deposed by Defendant(s) on October 17, 2013 | Negotiated Settlement 11/2013 | PRO-12-002 Case No.: D-189,648 | 2012-2013 |
| Mr. Andrew DuPont Locks Law Firm 1500 Walnut Street, 20 th Floor Philadelphia, PA 19102 | Plaintiff(s): Andre A. Harvey Defendant(s): Valero Energy Corporation, PBF Energy Company, LLC, Paulsboro Refining Company, LLC, Sunoco, Inc. (R&M) a/k/a Sun Oil Company, Inc. and Sun Company, Inc., Sunoco Logistics Partners, L.P., El Paso Corporation, The Carlyle Group, L.P., Delaware City Refining Company, LLC, Husky Energy, Inc., Lima Refining Company In the Court of Common Pleas of Philadelphia County (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 01/20/2017 | LOC-12-003 Case No. 121102430; 02471 | 2012-2017 |
| Mr. Brian E. Fritz Saltz, Mongeluzzi, Barrett & Bendsky, P.C. One Liberty Place, 52 nd Floor Philadelphia, PA 19103 | Plaintiff(s): Jeanne Gans, Administratrix of the Estate of George Gans, and in her own right Defendant(s): Sunoco, Inc., and Sunoco (R&M) Inc. Philadelphia County Court of Common Pleas Law Division (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 3/2014 | SMBB-13-001 Case No.: 03399 | 2013-2014 |
| Mr. Guy R. Bucci Bucci Bailey & Javins LC PO Box 3712 | Plaintiff(s): William (Rick) Potter Defendant(s): B&F Contracting, Inc. and its successors 198 | Fall Protection | Negotiated Settlement 5-2015 | BUC-13-002 | 2013-2015 |

Page 26

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|---|---|---|--|-----------|
| Charleston, WV 25337 Mr. Chris Heavens Heavens Law Firm PLLC 2438 Kanawha Blvd., East Charleston, WV 25311 | State Road 716, Ashland KY 41102 (Supported Plaintiff) | Pre-Suit – Wrote Expert Report | | | |
| Mr. Guy R. Bucci Bucci Law Firm PO Box 3712 Charleston, WV 25337 | Plaintiff(s): Muriel A. Thomas and Jackie Thomas, her husband Defendant(s): Interiors Plus, LLC, a West Virginia Limited Liability Company, CENTAUR Floor Systems, LLC, ECORE International, Inc. a Pennsylvania Corporation, and Russell Morrison d/b/a/ Alpha Professional, vs. Bostic, Inc., Third-Party Defendant In the Circuit Court of Kanawha County, West Virginia (Supported Plaintiffs) | Exposure to MDI | WV Workers' Compensation Office of Judges Decision of Reversal in Favor of Plaintiffs 12/19/2014 Negotiated Settlement 05/2016 | BUC-13-001 Case No.: 14-C-106 | 2013-2016 |
| Mr. Brian E. Fritz Saltz, Mongeluzzi, Barrett & Bendesky, P.C. One Liberty Place, 52 nd Floor Philadelphia, PA 19103 | Plaintiff(s): John and Jacquelyn Coen, Husband and Wife Defendant(s): Carboline Co., RPM, et al. Philadelphia County Court of Common Pleas Law Division (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 11/2013 | SMBB-13-002 Case No.: 1714 | 2013 |
| Ms. Jo Anna Pollock Simmons Attorneys At Law 707 Berkshire Blvd. P.O. Box 521 East Alton, IL 62024 | Plaintiff(s): Bridgeton Class Action – Marsha Buck, Troy Lewis, Jean Lewis, Mike Head and Janet Head, individually and on behalf of all others similarly situated. Defendant(s): Republic Services, Inc., Allied Services LLC d/b/a Republic Services of Bridgeton, Bridgeton Landfill, LLC In the United States District Court Eastern District of Missouri. (Supported Plaintiffs) | Benzene Exposure Deposed by Defendant(s) 10/30/2013 | Negotiated Settlement 2013 | SIM-13-002 Case No.: 13-CV-00801 | 2013 |
| Mr. Douglas J. May Travelers Staff Counsel 625 Eden Parkway, Suite 510 Cincinnati, OH 45202 | Plaintiff(s): Arshot Investment Corporation, et al. Defendant(s): E.V. Bishoff Company, et al. In the Court of Common Pleas Franklin County, OH (Supported Defendant – Mason) | Brick Veneer Failure Structural at Hampton Inn, Columbus, OH Site visit and Expert Report | Negotiated Settlement 2/2014 | TRA-13-001 Case No.: 12CV-10-12920 | 2013-2014 |
| Mr. John Vincent Weston Hurd LLP 10 W. Broad St., Suite 400 Columbus, OH 43215 | Plaintiff(s): Tutor Time 123 LLC Defendant(s): Air Force One, Inc. Pre-Lawsuit (Supporting Defendant) | HVAC Failure Claimed Site Visit and Expert Report | Settled 2013 | WES-13-001 Claim #: NR- CMM-6050718- 110913-A | 2013 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|--|--|--|--|-----------|
| Mr. Andrew DuPont Locks Law Firm 1500 Walnut Street, 20 th Floor Philadelphia, PA 19102 | Plaintiff(s): David A. Johnson and Laura Johnson Defendant(s): Armored Autogroup, Inc. d/b/a STP; Berryman Products, Inc.; CRC Industries, Inc.; Locitite Corporation n/k/a Henkel Corporation; Illinois Tool Works, Inc., solely as successor-in-interest to Permatest, Inc.; Radiator Specialty Company; United States Steel Corporation, Safety-Kleen Corp.; Safety-Kleen Systems, Inc.; 3M Company; Texaco, Inc.; Chevron U.S.A., Inc.; Individually and Successor in Interest to Texaco, Inc., Justice Brothers, Inc.; Genuine Parts Company; Henkel Corporation Individually and as Successor in Interest to Locitite Corporation and Henkel Locitite Corporation; Sunoco, Inc. (R&M); Volvo Cars, etc. In the Superior Court of the State of California for the County of Alameda (Supported Plaintiffs) | Benzene Exposure Deposed by Defendant(s) 3/21/2014; 4/8/2014; 4/24/2014 | Negotiated Settlement 6/2014 Re-opened 2016 and re-settled 9/2016 | LOC-13-001 Case No.: 001641 A142485 In the Court of Appeal of the State of California, First Appellate District | 2013-2016 |
| Mr. Andrew DuPont Locks Law Firm 1500 Walnut Street, 20 th Floor Philadelphia, PA 19102 | Plaintiff(s): David Butler and Teri Rhodes Defendant(s): Sunoco, Inc. (R&M) FKA Sun Company, Inc. FKA Sun Oil Company; United States Steel Company; and Radiator Specialty Company. In the Court of Common Pleas of Philadelphia County, Pennsylvania Civil Division (Supported Plaintiffs) | Benzene Exposure | Testified in Trial 7/29-30/2014 Decision in Favor of Defense 8/8/2014 | LOC-13-001 Case No.: 001641 | 2013-2014 |
| Mr. Thomas E. Schwartz Holloran White & Schwartz, LLP 2000 South 8th Street St. Louis, MO 63104 | Plaintiff(s): Elroy Buyat, Jr. Defendant(s): Mallinckrodt, Inc., Covidien, Inc., Safety-Kleen Systems, Inc., Heritage-Crystal Clean, LLC., and Engineered Lubricants, Co In the Circuit Court of St. Louis County, State of Missouri (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 2014 | HOL-13-001 Case No.: 1122-CC00786 | 2013-2014 |
| Mr. Andrew DuPont Locks Law Firm 1500 Walnut Street, 20 th Floor Philadelphia, PA 19102 | Plaintiff(s): Layne Kleinschmit and Cynthia Kleinschmit Defendant(s): 3M Company; Berryman Products, Inc.; The Blaster Corporation, CRC Industries, Inc., Genuine Parts Company, d/b/a NAPA; Henkel Corporation, individually and as successor in interest to Locitite Corporation and Henkel Locitite Corporation; Locitite Corporation n/k/a Henkel Corporation; Illinois Tool Works, Inc., d/b/a Permatest and d/b/a Gumout and d/b/a LPS Laboratories and d/b/a Wynn's; The Pep Boys – Manny, Moe & Jack; Radiator Specialty Company; Safety-Kleen Corporation, Safety-Kleen Systems, Inc., Sunoco, Inc. (R&M) f/k/a Sun Company, Inc. and f/k/a Sun Oil Company, Inc., Technical Chemical Company; and | Benzene Exposure | Negotiated Settlement 06/2015 | LOC-14-001 Case No. VC060106 | 2013-2015 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|--|---|----------------------------------|--|-----------|
| | United States Steel Corporation In the Court of Common Pleas, Philadelphia County (Supporting Plaintiffs) | | | | |
| Mr. Mark R. Staun The Segal Law Firm 810 Kanawha Boulevard, East Charleston, West Virginia 25301 | Plaintiff(s): Steve Ansell Defendant(s): EXXON MOBIL CORPORATION, a New Jersey corporation; SAFETY-KLEEN SYSTEMS, INC., a Wisconsin corporation; RADIATOR SPECIALTY COMPANY, a North Carolina corporation; CRC INDUSTRIES, INC., a Pennsylvania corporation; WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, an agency of the State of West Virginia; NAZDAR COMPANY, individually and as Successor-by-Acquisition/Merger to ADVANCE PROCESS SUPPLY CO., an Illinois corporation; ADVANCE PROCESS SUPPLY CO., an Illinois corporation; 3M COMPANY, a Delaware corporation; FUJIFILM NORTH AMERICA CORPORATION, as Successor-by Merger to FUJIFILM SERICOL U.S.A., INC., as Successor-by-Merger to SERICOL, INC., a New York corporation; UNCOMMON CONGLOMERATES, INC., a Division of CYBERBOND, LLC, a Delaware limited liability company Circuit Court of Marshall County, West Virginia (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 2015 | SEG-13-001 Case No.: 13-C-119K | 2013-2015 |
| Mr. John Vincent Weston Hurd LLP 10 W. Broad St., Suite 400 Columbus, OH 43215 | Plaintiff(s): Mercer Square, LLC Defendant(s): Preferred Real Estate Pre-Suite Inspection and Report (Supported Defendant) | Fire Suppression System Freeze Failure Jack Nicklaus Villa – 18th Green – Muirfield Village, Dublin, OH | Negotiated Settlement 2014 | WES-14-001 | 2014 |
| Mr. Darren Brown Provost Umphrey 490 Park Street Beaumont, TX 77704 | Plaintiff(s): Carl Nolan Smith, III Defendant(s): Chevron U.S.A., Inc.; Chevron Chemical Company, LLC; ExxonMobil Oil Corporation; Texaco, Inc.; Atlantic Richfield Company; BP Amoco Chemical Company; BP Products North America, Inc.; Canadianoxy Offshore Production Co.; ConocoPhillips Company; Total Petrochemicals USA, Inc.; Union Oil Company of California; and Huntsman Petrochemical, Inc. 14th Judicial District Court, Parish of Calcasieu, State of Louisiana (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 10/2014 | PRO-14-001 Cause No.: 2012-5290A | 2014 |
| Mr. Robert Black Black Law, PC The Lyric Centre | Plaintiff(s): Joseph Dwayne Meeks and Jane Meeks Defendant(s): Ace Hardware, British Petroleum (BP); E.I. du Pont de Nemours and Company (DuPont), Pittsburgh Paint | Benzene Exposure | Negotiated Settlement 09/2015 | BLA-14-001 Cause No.: | 2014-2015 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|--|--|----------------------------------|---|-----------|
| 440 Louisiana, Suite 2400 Houston, Texas 77002 | Glass (PPG), Savogran; Shell Oil Company (Shell); Sherwin-Williams Company (S-W), W.M. Barr & Company (WM Barr), and US Steel Company. Galveston County, Texas – 122 nd District Court (Supported Plaintiffs) | | | 14-CV-1044 | |
| Mr. Scott R. Frieling Allen Stewart, P.C. 325 N. St. Paul St., Ste. 2750 Dallas, TX 75201 | Plaintiff(s): Thomas Koenig and Rebecca Koenig Defendant(s): Ashland, Inc., BASF Corporation, Dow Chemical Company, Dynabrade, Inc., E.I. DuPont de Nemours & Co., Egyptian Lacquer Manufacturing Company, Inc., GE Betz, Inc., Henkel Corporation, NB Coatings, Inc., Zinsser Co., Inc. as successor to Parks Corporation, Plastic Process Equipment, Inc., Rohm & Hass Company, Worwag Coatings, LLC. In the Court of Common Pleas, Philadelphia County, PA (Supporting Plaintiff) | Benzene Exposure | Negotiated Settlement 04/2015 | ALL-14-001 Cause No.: 12-12-03188 | 2014-2015 |
| Mr. Scott R. Frieling Allen Stewart, P.C. 325 N. St. Paul St., Ste. 2750 Dallas, TX 75201 | Plaintiff(s): Jerri A. Rowan Defendant(s): Sherwin-Williams, Inc., Columbia Forest Products, Inc., Futch Lumber, FTL Properties of Delaware, LLC, Baer Wurth, Aetna, Charter Industries, Temple-Inland, Inc., Tamarac Distributors, Charles F. Shiels, Blueinx, Flagg, ATC Panels, Inc., Georgia Pacific Wood Products, Weyerhaeuser, Jeld-Wen, Inc., Custom Plywood, Rugby, Inc., Distributor Service, Inc., In the Court of Common Pleas, Cuyahoga County, OH (Supporting Plaintiff) | Benzene Exposure | Negotiated Settlement 01/2015 | ALL-14-002 Cause No.: CV 13 813181 | 2014-2015 |
| Mr. Peter Alfert Hinton Alfert & Kahn LLP 200 Pringle Ave., Suite 450 Walnut Creek, CA 94596 | Plaintiff(s): Gavin Kirk, a minor by and through his guardian ad litem Stephen Tobin Kirk, Sarah Kirk, and Stephen Tobin Kirk individuals, Ryan Goode, a minor by and through his guardian ad litem James Goode, Jaqueline Goode and James Goode individuals Defendant(s): Varco International, Inc., Varco Heat Treating Company, Varco Oil Tools, National Oil Well Varco, Plazamerica Inc., Plaza National Real Estate, Inc., Plaza Atrium, Inc., Leed Plaza Atrium, LLC, successor in interest to Plazamerica, Inc., Leed Properties, Cove Properties, Inc., Cove Development Co., Cove Builders, Inc., County of Orange, and Does 1 through 200, inclusive. In the Superior Court of the State of California, for the County of Orange (Supporting Plaintiffs) | Soil/Gas Exposure Deposed by Defendant(s) 07/31/ 2015 | Negotiated Settlement 02/2016 | HIN-14-001 Cause No.: 30- 2010-00423097 & 30-2011- 00512364 Consolidated | 2014-2016 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|--|---|---|------------------|-----------|
| Mr. Timothy O'Brien Levin Papantonio 316 S. Baylen St., #600 Pensacola, FL 32502 Mr. Robert Bilott Taft Stettinius & Hollister LLP 425 Walnut Street, Suite 1800 Cincinnati, OH 45202 Mr. Richard Schulte Wright & Schulte 812 E. National Road Vandalia, OH 45377 | Plaintiff(s): C-8 Class Action Defendant(s): DuPont de Nemours United States District Court Southern District of Ohio – Eastern Division (Supporting Plaintiffs) | Exposure to C-8 Deposed by Defendant(s) 03/30/2015 Daubert Challenge by Defendant(s) – Denied August 6, 2015 | Case 1 Bartlett – Testified in Trial 09/21, 22, 23/2015 Case 1 Decision in favor of Plaintiff Carla Bartlett 10/7/2015 Case 2 Freeman – Testified in Trial 06/10, 13, 14, 15/2016 Case 2 Decision in favor of Plaintiff David Freeman 07/08/2016 Case 3 Vigneron – Testified in Trial 12/1 & 5/2016 Case 3 Decision in favor of Plaintiff Keith Vigneron 01/05/2017 Case 4 Moody – 01/30, 31, and 02/ 1/2017 Case 4 Larry Moody - Part of Class Action Negotiated Settlement of 900 Million + 02/13/2017 | WRI-14-001 | 2014-2017 |

Page 31

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|---|--|--|--|-----------|
| Mr. Emmett McGowan Nelson Brown & Co. 518 Township Line Road, Suite 300 Blue Bell, PA 19422 | Plaintiff(s): Alva & Fern Hoopengardner Defendant(s): Meridian Citizens Mutual Insurance Company United States District Court Eastern District of Pennsylvania (Supported Defendant) | Indoor Air Quality (IAQ) | Negotiated Settlement 2014 | NEL-14-001 Cause No.: 2:13-cv-07485- PD | 2014 |
| Mr. Scott R. Frieling Allen Stewart, P.C. 325 N. St. Paul St., Ste. 2750 Dallas, TX 75201 | Plaintiff(s): Wade Wesley Wiederhold Defendant(s): Safety Kleen, Corp., Safety Kleen Systems, Inc., Rust-Oleum Corp., Berryman Products, Inc., ITW Permatest, a Division of Illinois Tool Works, Inc., The Valspar Corporation, Henkel Corporation, Deere & Company, Gold Eagle Co., The Sherwin-Williams Company, Apollo Industries, Inc., Claire-Sprayway, Inc., and Ozark Kenworth, Inc. In the Circuit Court of Jackson County, Missouri 2 at Independence (Supported Plaintiff) | Benzene Exposure Deposed by Defendant(s) 10/22/2015 | Testified in Trial on 06/21/2016 Decision in favor of Defendant 07/2016 | ALL-14-002 Case No.: 1316-CV13192 | 2014-2016 |
| Mr. Andrew DuPont Locks Law Firm 1500 Walnut Street, 20 th Floor Philadelphia, PA 19102 | Plaintiff(s): Louis Arthur DeSorbo Defendant(s): United States Steel Corporation; Sunoco, Inc. (R&M) f/k/a Sun Company, Inc. and f/k/a Sun Oil Company, Inc.; 3M Company; Rogersol, Inc.; Rycoline Products, Inc., a Division of Sun Chemical Commercial Group a/k/a Rycoline Products, LLC and Successor to Rogersol, Inc.; Sun Chemical Corporation, Individually and a Parent and Successor to Rycoline Products, LLC, a/k/a Rycoline Products, Inc. and Successor to Rogersol, Inc.; Van Son Holland Ink Corporation of America; Varn International, d/b/a Varn Products Company; Day International, Inc., Individually and as Successor to and d/b/a Varn Products Company; Printers Service d/b/a Prisco; Deleet Merchandizing Corporation; Cabrun Ink Products, Corporation; Handschy Industries, LLC; Chevron USA, Inc. Individually and as Successor In Interest to Unocal Corporation and its Subsidiaries; Philips Electronics North America Corporation d/b/a and a Parent and Successor In Interest . H. Agriculture and Nutrition, Inc. and Thompson-Hayward Chemical Company; Emco Chemical Distributors, Inc.; PPG Industries, Inc.; Shell Oil Company; Shell Oil Products US, INC.; Fisher Scientific International, Incorporated; Mallinckrodt Baker, Incorporated, Individually and as Successor In Interest to J.T. Baker, Incorporated; Total Petrochemicals & Refining USA, Incorporated, Individually and as Successor In Interest to American Petrofina, Inc. Total Plaza a/k/a FINA, Inc., Cosden Oil Company, Graphic Packaging International, Inc. Individually | Benzene Exposure | Testified in Trial 02/10/2016 Decision in Favor of Plaintiff 02/2016 | LOC-14-002 Cause No. 003450 | 2014-2016 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|---|---|-----------------------------------|-------------------------------|--|-----------|
| | and Successor in Interest to Handschy Industries, LLC.; Anchor/Lith-Kem-Ko, Incorporated, a Subsidiary of Fugifilm Hunt Chemicals USA, Incorporated; Fugifilm Hunt Chemicals USA, Incorporated, d/b/a and Parent and Successor to Anchor/Lith-Kem-Ko, Incorporated; Sinclair & Valentine Company, Incorporated; Hurst Chemical Company; Gans Ink & Supply Company, Incorporated; Spinks Ink Company, Incorporated; Flint Ink Corporation; et al. In the Court of Common Pleas, Philadelphia County, Pennsylvania (Supported Plaintiff) | Wood Dust Exposure | Negotiated Settlement 2016 | ALL-15-001 Cause No.: 01960 | 2015-2016 |
| Allen Stewart Stephanie Sherman 325 N. St. Paul St., Suite 2750 Dallas, TX 75201 | Plaintiff(s): Christopher Lightfoot Defendant(s): Georgia-Pacific Wood Products LLC, Georgia-Pacific, LLC, individually and as successor-in-interest to Georgia-Pacific Corporation, Weyerhaeuser Company, Weyerhaeuser NR Company, Lowes Home Centers, LLC (NC), and John Doe 1 State Court of Fulton County, GA (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 12/2016 | PRO-15-001 Cause No.: 2013-3723 | 2015-2016 |
| Mr. Darren Brown Provost Humphrey P.O. Box 4905 Beaumont, Texas 77704 | Plaintiff(s): Cathy Withers Defendant(s): Chevron U.S.A., Texaco, Inc., Union Oil Company of California, Alon USA, LP, Anadarko E & P Onshore, LLC, ConocoPhillips Company, ExxonMobil Oil Corporation, PB Amoco Chemical Company, BP Products North America, Inc., Canadianoxy Offshore Production Company, Citgo Petroleum Corporation, Delek Logistics Operating, LLC, Total Petrochemicals & Refining, USA, Inc., El Paso Energy E.S.T. Company, El Paso Natural Gas Company, LLC, Enbridge Marketing LLC, Targa Resources, Axiall Georgia Gulf Corp., Hunt Oil Company, et al. In the 14 th Judicial District Court for the Parish of Calcasieu, State of Louisiana, Division "D" | Structural Damage from Water Leak | Negotiated Settlement 10/2016 | KJK (SMI)-15-001 Cause No.: 14 OC 739 | 2015-2016 |
| Kohrman Jackson & Krantz Ms. Heather Zilka 10 West Broad Street, Suite 1900 Columbus, OH 43215 | Plaintiff(s): Mary Christian Defendant(s): Lawrence Water, et al. Lawrence County Common Pleas, Ohio (Supported Defendant) | Slip & Fall | Negotiated Settlement 07/2017 | BLA-15-001 Cause No.: 01-15-0005-2333 | 2015-2017 |
| Mr. Everett Day Black Law, PC The Lyric Centre 440 Louisiana, Suite 2400 Houston, Texas 77002 | Plaintiff(s): Yomanoh Akpobo Defendant(s): Ross Dress for Less, Inc., Houston, TX American Arbitration Association Arbitration Proceedings – Employment Arbitration | | | | |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|---|---|----------------------------------|---|--------------|
| Mr. John E. Tomlinson Beasley, Allen, Crow, Methvin, Portis & Miles, P.C. 218 Commerce Street Montgomery, AL 36104 | (Supported Plaintiff) Plaintiff(s): Sheila D. Keenum, Individually, and as Personal Representative of the Estate of Wendell Joe Keenum, deceased Defendant(s): E. I. du Pont de Nemours and Company; PPG Industries, Inc.; SEM Products, Inc.; The Valspar Corporation; Rust-Oleum Corporation; O'Reilly; Automotive Stores, Inc.; R. & R. Bumper & Body Supply, Inc.; Detail Supply, LLC; Sam T. Carter Oil Company, Inc.; The Sherwin-Williams Company; Hunt Refining Company; One Shot LLC; Cumberland Products Incorporated; Powers Paper Company, and Fictitious Defendant(s) *1 through 100. In the Circuit Court of Colbert County, Alabama. (Supported Plaintiff) | Exposure to Paint Products Deposed by Defendant(s) 09/30/2020 | On-going | BEA-16-001 Case #: 20-CV-2016-900050. | 2016-Present |
| Mr. Chris Heavens Heavens Law Firm PLLC 2438 Kanawha Blvd., East Charleston, WV 25311 | Plaintiff(s): Dominick Hall Defendant(s): Silicon Processors, Inc. In the Circuit Court of Wood County, WV (Supported Plaintiff) | Personal Injury Deposed by Defendant(s) 08/09/2017 | Negotiated Settlement 10/2017 | HEA-15-001 Case No: 15-C-471 | 2015-2017 |
| Mr. Andrew Lipton Hobson & Bradley 2190 Harrison Beaumont, TX 77701 | Plaintiff(s): Herbert C. Cowart Defendant(s): ExxonMobil, Hess, Chevron/Texaco, Keystone Shipping, ConocoPhillips, Canadianoxy Offshore Production Company, Coastal Fuels Marketing Company, Shell Oil Company, Union Carbide Corporation, Signet Maritime Corporation, Kirby Inland Marine, LP, BP Products North America, Marathon Oil Company 14th Judicial District Court, Parish of Calcasieu, State of Louisiana, Division E (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 07/2017 | HOB-16-001 Cause No.: 2004-3133 | 2016-2017 |
| Ms. Jo Anna Pollock The Simmons Firm One Court Street Alton, IL 62002 | Plaintiff(s): Gerald Dean Maberry Defendant(s): Shell Oil Company, Equilon Enterprises, LLC, d/b/a Shell Oil Products, US; ConocoPhillips Company; WRB Refining LP; ConocoPhillips WRB Partner LLC; Cenovus GPCO LLC; and, BP Products North America, Inc. In the Circuit Court for the Third Judicial Circuit, Madison County, IL (Supported Plaintiff) | Benzene Exposure | Negotiated Settlement 09/2016 | SIM-16-001 Case No.: 15-L-1193 | 2016 |
| Mr. Robert Black Black Law, PC The Lyric Centre 440 Louisiana, Suite 2400 | Plaintiff(s): Gregory A. Justice et al. Defendant(s): Radiator Specialty (DuPont), Savogran; Shell Oil Company (Shell); Sherwin-Williams Company (S-W), W.M. Barr & Company (WM Barr), and US Steel Company | Benzene Exposure | Negotiated Settlement 02/2017 | BLA-16-001 Cause No.: 15-CV-0907 | 2016-2017 |

| ATTORNEY/LAW FIRM | CASE (Plaintiff(s) and Defendant(s) & Role | SUBJECT | DECISION | Project #/Case # | TIMEFRAME |
|--|--|--|---|--|-----------|
| Houston, Texas 77002 | In the District Court of Galveston County, TX – 112nd Judicial District (Supported Plaintiffs) | | | | |
| Mr. Robert Black Black Law, PC The Lyric Centre 440 Louisiana, Suite 2400 Houston, Texas | Plaintiff(s): Nin Koy Defendant(s): Steel Masters, LP, Steel Masters-GP LLC, and J.T. Vaughn Construction, LLC. In the District Court of Harris County, TX – 190th Judicial District (Supported Plaintiff) | Personal Injury - Finger Amputation | Negotiated Settlement 10/2016 | BLA-16-002 Civil Cause No: 2015-01-01775 | 2016 |
| R. Dean Hartley Hartley Law Group, PLLC The Wagner Building 2001 Main Street, Suite 600 Wheeling, WV 26003 | Plaintiff(s): Lee D. Tanked, Jr. and Cheryl Tankard, his wife. Defendant(s): Advance Auto Parts, Inc.; A.E. Lottes, Co., f/k/a Carquest Auto Parts #1, Inc. d.b.a. Carquest Store #2856; CQ Sourcing, Inc.; Walker Automotive Supply, Inc.; Safety-Kleen Systems, Inc.; CRC Industries, Inc.; 3m Company; and The B'Laster Corporation. In the General Court of Justice, Superior Court Division State of North Carolina, Wake County (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 02-01-2020 | HAR-16-002 Civil Cause: 16- CVS-2949 | 2016-2020 |
| Mr. David J. Carney Anapol Weiss One Logan Square 130 N. 18th St. Suite 1600 Philadelphia, PA 19103 | Plaintiff(s): David S. Garrison and Laura Timmes-Garrison Defendant(s): Smiths Group, PLC; Saint-Gobain North America, d/b/a Saint-Gobain Performance Plastic Corporation, successor in interest to CHR Industries, Inc., and Dixon Industries Corporation, successor in interest to Penttube Plastics; Compressor Products International, LLC, successor in interest to Plastomer Products; Quaker City Chemicals, Inc.; Exxon Mobil Corporation; E.I DuPont de Nemours and Company, Inc. and W.N. Stevenson, Company Philadelphia County Court of Common Pleas, PA (Supported Plaintiffs) | Benzene Exposure | Negotiated Settlement 03/2018 | ANA-16-001 Case No.: 001960 | 2016-2018 |
| Mr. Chris Heavens Heavens Law Firm PLLC 2438 Kanawha Blvd., East Charleston, WV 25311 | Plaintiff(s): Walter H. Jones, Jr. Defendant(s): Family Handyman Services of Barbourville, LLC, George E. Linkous, individually and as owner of Family Handyman Services of Barbourville, LLC, and Absolut Roofing, LLC In the Circuit Court of Kanawha County, WV (Supported Plaintiff) | Personal Injury – Fall from Roof | Negotiated Settlement 10/2017 | HEA-16-001 Case No.: 15-C- 2059 | 2016-2017 |
| Mr. Chris Heavens Heavens Law Firm PLLC 2438 Kanawha Blvd., East Charleston, WV 25311 | Plaintiff(s): Paul Michalec and Jennifer Michalec Defendant(s): American Supply Company, Inc. In the Court of Common Pleas, Philadelphia County, PA (Supported Plaintiff) | Personal Injury – Loading Dock Injury | Testified in Trial 07/07/2017 Decision by | HEA-16-003 Civil Cause No. 000893 | 2016-2017 |